DOCUMENT RESUME

ED 277 383 IR 051 724

AUTHOR Boomgaarden, Wesley; And Others
TITLE Ohio State University Libraries. Preservation Planning Program Study Report. Final Report.
INSTITUTION Association of Research Libraries, Washington, D.C. Office of Management Studies.
SPONS AGENCY National Endowment for the Humanities (NFAH), Washington, D.C.
PUB DATE Oct 86
NOTE 95p.; For other reports in this series, see ED 267 808-809, ED 274 372-374, ED 275 339, and IR 051 725-726.
AVAILABLE FROM Association of Research Libraries, Office of Management Studies, 1527 New Hampshire Ave. NW, Washington, DC 20036 ($10.00 prepaid).
PUB TYPE Viewpoints (120) -- Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Libraries; *Facility Planning; Financial Needs; Higher Education; Information Dissemination; Library Facilities; *Library Materials; *Library Planning; Long Range Planning; Occupational Information; Position Papers; *Preservation; Research Methodology; Self Evaluation (Groups)
IDENTIFIERS Book Restoration; *Ohio State University

ABSTRACT

The result of an 11-month study by six task forces, this report confirms the precarious physical condition of the Ohio State University Libraries' (OSUL) collections and highlights problems with the physical environments in which the collections are housed. An introductory discussion considers the OSUL in their institutional setting, the Association of Research Libraries/Office of Management Studies (ARL/OMS) Preservation Planning Program, planning assumptions, definition of terms, and OSUL preservation efforts to date. Key areas of concern as determined by the preservation task forces are summarized, and detailed recommendations designed to enhance the longevity of the OSUL collections are proposed for the following broad areas: (1) improvement of the physical environments; (2) management and development of the collections; (3) preservation and conservation treatments; and (4) handling, shelving, and display of materials. A proposed implementation schedule by subject area is also provided. Three appendices include a listing of the preservation self-study task forces and task force members; a draft copy of the Ohio State University Libraries Preservation Policy Statement Outline; and the Ohio State University Libraries Preservation Office organization chart/directory. Statistical information about the collections is provided in four tables. (KM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Maxine Sitts

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

OFFICE OF MANAGEMENT STUDIES

ASSOCIATION OF RESEARCH LIBRARIES 1527 New Hampshire Avenue, N.W., Washington, D.C. 20036 • (202) 232-8656

EDITORS NOTES ON THIS PUBLICATION SERIES

This final report is one of ten in a series resulting from libraries conducting the OMS **Preservation Planning Program** (PPP). A two-year grant from the National Endowment for the Humanities enabled the OMS to select and work with ten Association of Research Libraries members as they conducted the **Preservation Planning Program** and served as demonstration sites for other libraries in their areas. Applications from interested libraries were screened in Fall 1984, and ten libraries were chosen to conduct PPP self-studies from 1984 to 1986.

The **Preservation Planning Program** is designed to put self-help tools into the hands of library staff responsible for developing plans and procedures for preserving library materials. A typical library takes from four to six months to complete the Program, which involves the cooperation of 25 to 30 staff members. Using a structured planning procedure, a manual, and an extensive resource notebook, library staff prepare a detailed action plan for local preservation program development for the next three to five years, with the on-site assistance of a librarian-consultant trained by the Office of Management Studies.

Most PPP final reports begin with a discussion of the background of the institution and the external factors related to the current preservation situation. Task force reports then provide details on the specific concerns and interests of the individual sites. In a final section, libraries lay out their implementation plans.

Copies of PPP final reports are available for $10.00 each, either through library distributors, or by direct order from the OMS. Prepayment is required, and reports should be ordered by complete title, including library name. OMS Publication order forms are available by writing or calling OMS, 1527 New Hampshire Ave., Washington, D.C. 20036. 202 232-8656.

The Office of Management Studies was established in 1970 by the Association of Research Libraries with financial support from the Council on Library Resources. The Office also has received funding from The Andrew W. Mellon Foundation, The General Electric Foundation, The National Endowment for the Humanities, The Lilly Endowment, inc., and the H.W. Wilson Foundation. The OMS provides self-study, training, and publication programs and services to academic libraries, to assist them with organizational and staff development and strategic planning for change.

The Ohio State University
LIBRARIES

Preserving The Ohio State University Libraries' Collections: The OSUL Preservation Planning Program

The Ohio State University Libraries
Columbus, Ohio

September 1986

ARL/OMS Preservation Study Team:

Hazel Benson
Wesley Boomgaarden, Chair
Helen Brooks
Lucy Caswell
Gay Dannelly
Maureen Donovan
Amy Eley
Robert Kerr

CONTENTS

page:

Abstract i

I. Executive Summary 1

II. Introduction 11

A. The Ohio State University Libraries in their institutional setting 11
B. The ARL/OMS Preservation Planning Program 13
C. Planning assumptions 15
D. Definition of terms 16
E. Preservation efforts to date in the OSU Libraries 17

III. Key Areas of Concern: A Summary of the Major Findings of the Self-Study's Six Task Forces 20

A. Task Force 1: The physical environments of the collections 20
B. Task Force 2: The physical condition of the collections 25
C. Task Force 3: Disaster prevention and preparedness 32
D. Task Force 4: Organizational implications of preservation 35
E. Task Force 5: Preservation education and awareness 39
F. Task Force 6: Resources, collection development and preservation 42

IV. Recommendations for Preserving the OSU Libraries' Collections 47

A. Recommendations relating to improvement of the physical environments 48

B. Recommendations relating to the management and development of the collections 53

C. Recommendations relating to preservation and conservation treatments 56

D. Recommendations relating to handling, shelving and display of materials 59

V. Implementation schedule 66

VI. Appendices 75

ABSTRACT

The nation's research libraries face a major crisis in the physical deterioration of their collections. These collections — especially most books and other paper documents produced since 1850 — are at risk because of their chemical properties, mechanical construction, conditions of storage, and intensity of use. The problems of collection deterioration are a sobering reminder to research institutions that responsibility for preserving library collections is inseparable from the work of developing and maintaining them. Such preservation efforts can be accomplished only through cooperative regional and national efforts.

The Ohio State University Libraries, recognizing its place in the nation's scholarly community and the importance of its research collections, also acknowledges the precarious physical condition of its collections. As a consequence, the Libraries has begun significant preservation efforts. Over the past year, a carefully-conducted preservation self-study has been completed with assistance from the Association of Research Libraries, to outline the primary preservation problems, challenges and opportunities within the Libraries' collections and to propose an action plan.

This self-study examined six areas that directly relate to the preservation of the University Libraries' collections. In summary: (1) The Libraries' face very serious space shortages, which have very negative consequences for the proper care of the collections. (2) Between one-fifth and one-quarter of the book collections have become embrittled to the point that the volume should not be handled. (3) Some 90% of the book collections have a shelf life of less that one century from their date of publication because of the acidic nature of their papers. (4) The Libraries' collections are vulnerable to flood, fire, and other disasters. (5) "Preservation awareness" must be instilled in all library users and employees. (6) Articulation of policies for collection management and development are central to the proper selection of materials for preservation and conservation treatments.

As a research library, we know what must be done to assure the preservation of the collections whose self-destruction, however many years may be involved, is sure. How to arrest further deterioration and preserve documentary heritage of the ages will depend to a great extent on the human and material resources that the University can provide and the degree to which nascent regional and national cooperative ventures succeed.

"Preserving The Ohio State University Libraries' Collections: The OSUL Preservation Planning Program"

I. Executive Summary

Introduction

The Ohio State University Libraries' (OSUL) collections on the Columbus campus number more than four million volumes, supplemented by 2.6 million pieces in microform and tens of thousands of items in a variety of other formats. The Libraries' mission is to participate in and to support the University's teaching, research, and service to the best level that human and material resources will allow. The Libraries and its collections — which are organized in order to support this mission — provide direct and specific services primarily to the faculty, students, and staff of the University.

The Libraries recognize an obligation to provide ready access to materials in the collections and information generally. The alarming degree of deterioration that the collections have suffered and may continue to suffer threatens to diminish the Libraries' ability to do so. Preservation of library materials is a critical issue for the University and its Libraries because it is an issue which has a direct impact upon the quality, indeed the survival, of the research collections, virtually all of which are threatened by a combination of chemical, physical, economic, and biological factors.

In 1984, the Libraries began a concerted effort to improve its preservation capabilities by appointing a Preservation Officer and establishing a Preservation Office. The following year, in an effort to aid in planning for preservation in a comprehensive and systematic manner, the Libraries began its participation in an assisted self-study and planning process as one of ten research libraries selected for this purpose by the Association of Research Libraries. The project was funded by the National Endowment for the Humanities in an effort to provide research libraries a tested, structured method for such planning to assess a library's preservation needs and to propose action to deal with them. In October 1985, the Director of Libraries appointed an eight-member Preservation Study Team (PST) to carry out this self-study. With the assistance of an additional thirty faculty and staff members from throughout the Libraries, the PST has analyzed the state of the Libraries' collections, examined the various environments in which they are housed, considered the need for preservation, and weighed available options for action. This Final Report summarizes the PST's findings and presents recommendations for consideration by the Libraries and the University.

Planning assumptions

The Preservation Study Team was charged to study six areas of specific concern: the physical environments of the collections, the physical condition of the collections, disaster preparedness, organizational implications of preservation, preservation education/awareness, and resources/collection development. Six task forces, each led by a member of the Preservation Study Team, were appointed to investigate these areas. Before undertaking the study, a set of underlying assumptions was agreed to by the Preservation Study Team:

- Preservation of the collections is essential to fulfilling the mission of the Libraries. Many of any established research library's holdings have deteriorated or are composed of unstable paper-based materials for which there is no simple or inexpensive preservation remedy. At Ohio State, the collections developed over many decades at substantial cost will continue to deteriorate, in some cases at a rapid rate, unless the University, its Libraries, and the nation can significantly expand current efforts. Failure to act inevitably will result in the loss of these collections to the University and the larger scholarly community. While research libraries will continue to collect materials in many formats, the greatest challenge now apparent is the preservation of older paper-based collections.

- A commitment to preservation activities has already been made by the Libraries in several areas, the most important of which has been the establishment of the Preservation Office with the attendant appointment of staff and acquisition of basic supplies and some equipment. In addition, several new buildings are planned or projected and a number of existing library facilities are to be improved. The Libraries' faculty is participating in the work of state and regional preservation networks and is actively seeking to increase and enhance these cooperative efforts.

- Institutional fiscal constraints are a major factor affecting preservation efforts. The University Libraries has already shown strong commitment to preservation efforts, and the University Administration has expressed definite interest. There is good reason to be optimistic regarding funding for a preservation program. It must be assumed, however, that increased preservation efforts are contingent on substantial increases in the provision of funds, based on requests that must be competitive with other program initiatives throughout the University.

- Although the decentralized nature of the Libraries lends itself to the development of site-specific practices in many areas, participation in preservation activities will be system-wide, including all public and technical services areas and such broad-based programs as those in user education and automation.

- Emerging optical/digital technologies are already making an impact upon the Libraries' information services. It must not be assumed, however, that these technologies will — cheaply, easily or quickly, if ever — "solve" the myriad preservation problems presented by the great quantities of items in older paper-based collections.

FINDINGS OF THE SELF-STUDY

The physical environments of the collections

The Libraries' collections are dispersed among 48 separate areas and reading rooms in 25 different buildings on the Columbus campus. Each of the buildings varies significantly in age and condition, with most libraries housed in buildings that were not originally designed for that purpose. The task force gathered data on those environmental factors known to affect the longevity of library collections — temperature, relative humidity, light, particulates (dust, dirt, smoke), and biological agents (vermin, fungi). Additional data from all campus libraries concerning physical facilities and structures were also collected.

For paper-based library materials, national standards call for an ideal temperature of 65°F ± 5°F and a relative humidity of 50% ± 5%, with a minimum of six air changes per hour. Frequent fluctuations of temperature and humidity levels — "cycling" — are extremely harmful to library materials. None of the campus libraries surveyed met these standards, and in many cases the temperature and humidity levels were uncontrolled, with frequent and significant fluctuations. Light is measured in watts lumen, and standards call for maximum levels of 75 watts lumen from either natural or artificial light sources for spaces containing paper materials. Light readings taken in nearly all locations in the libraries far exceeded these guidelines. Few lighting fixtures have ultraviolet filters, nor are such filters routinely installed on windows. In a number of locations book bindings show signs of fading and oxidation, which lead to brittleness and eventually loss of text.

High temperature, humidity and light levels increase the rate at which a book deteriorates. Studies have shown that the rate of chemical reactions in cellulose (paper and cloth) doubles for each 5°C (9°F) rise in temperature. The University can significantly reduce the rate of deterioration of library collections by maintaining lower temperature levels and moderate and constant relative humidity levels, and by controlling light.

The task force also uncovered other concerns, chief among them the Libraries critical need for additional space for its collections and for users of the collections. Overcrowding has definite negative effects upon any library collection. Routine building maintenance and housekeeping are major concerns, as the task force observed dust and debris and a low level of housekeeping maintenance in most libraries.

The physical condition of the collections

The physical condition of library materials is essentially a function of three factors: (1) the inherent characteristics of the materials, notably the substances used in their manufacture and how these substances age; (2) the environmental storage conditions which the materials must endure; and (3) how, and how frequently, the materials are handled. Most of the 4 million volumes that make up the Libraries' collections — like most of the materials in other large research libraries — are composed of substances that predispose them to rapid deterioration. For most book collections this is largely a function of the acidity of modern paper, which tends to deteriorate in a self-destructive manner within 50 to 100 years of its manufacture. The degree of deterioration will vary from library to library, however, depending on the relative age and other quality factors associated with the materials (e.g., type of binding), and on storage and use conditions.

A carefully constructed and administered random sampling in the Main Library stack collection revealed that approximately 21% of the volumes in that collection are composed of already embrittled paper. Extrapolations of this estimate indicate that 420,000 volumes are embrittled in the Main Library collections, and 840,000 volumes are embrittled in the entire Libraries' system. Embrittlement of paper is an irreversable condition, with reformatting of texts to stable microform or alkaline (acid-free) paper medium the only currently-available cost-effective options.

Immediate action is necessary to reformat or replace much of the considerable collection of the Libraries' embrittled texts. Delays in such action may lead to the loss of already embrittled materials. A staggering 90% of the books sampled were composed of acidic paper, paper that even if not embrittled at this time, can be predicted to have a shelf life of no more than a century or so from the time of publication. The emerging technology of "mass deacidification" appears to be the most cost-effective preservation solution to this problem.

Ten percent of the sampled volumes possessed structural damage to their bindings, and some 11% of the collections have suffered some form of mutilation or defacement.

In summary, the conditions of the collections indicates a strong need for preservation reformatting, replacement of available texts with reprint copies, routine and advanced conservation techniques, additional space for the collections, much improved maintenance of physical facilities, and a broadscale, ongoing educational effort aimed at all users of the collections.

Disaster prevention and preparedness

The Libraries have been fortunate thus far in being spared from the devastating effects of major fires, tornadoes, or severe floods. Nevertheless, the Libraries have endured many smaller emergencies that have damaged or destroyed portions of the collections. As buildings, pipes and heating/air conditioning systems age, and as the continuing need for more space forces the Libraries to house materials in less-than-ideal conditions, the collections become increasingly vulnerable to the elements.

In studying emergency preparedness in the Libraries the task force noted the lack of a comprehensive plan for emergency preparedness and recovery in the event of fire, flood and other such situations that threaten the collections. The Libraries are particularly vulnerable to fire, in addition to ever-present roof leaks and occasional burst or leaky pipes. The task force also stressed the need for improved routine building maintenance in all areas.

The task force identified the need for a comprehensive Emergency Plan, and in fact prepared such a document for system-wide implementation by the Preservation Office.

Organizational implications of preservation

Within the OSU Libraries there are preservation implications in the work of nearly every unit — in selection, routine processing, circulation, stack maintenance, book repair, the mail system, binding policies, and so on. Preservation is, ideally, the concern of every person in the employ of the Libraries. The task force studying these issues examined a wide variety of processing and handling issues that touch every department in the Libraries system. The task force found that the organizational structure was not supported by well-documented procedures for preservation action in the Libraries. The task force made numerous specific recommendations relating to this issue.

Preservation education and awareness

Given that over 20% of the book collections are embrittled, that tens of thousands of volumes now require repair or other treatments, and that over 11% of the collections have been mutilated or defaced in some degree, efforts to reduce preventable damage caused by thoughtlessness or improper usage must be seen as cost-effective "preventive medicine." The task force studying this issue identified the need to communicate preservation issues to all of the Libraries' employees and users, to stress the essential idea that "preservation is everyone's business."

Resources, collection development and preservation

The physical deterioration of a library's research and curricular-supporting collections has a negative impact on the quality and usefulness of those collections. In the Libraries, where the quantities of deteriorated materials are currently greater than the Libraries' capacity to treat or replace them, the processes of selection for preservation becomes critical. The issues of availability of resources and collection management and development are central to these efforts.

The task force cited the critical need for comprehensive, written collection management and development policies in order to guide the Libraries in preservation decision-making. The Libraries lack such a document, the sine qua non for determining preservation treatment priorities in the collections.

The task force also studied the need for defining significant segments of the general collections that require a protected environment because of their relative rarity, monetary value, or vulnerability to theft or mutilation. It specifically recommended that the Libraries contract with a service agency for preservation microfilming, rather than undertaking the major capital and operating expenses of establishing and maintaining a facility on campus. The task force recommended developing a preservation management file as part of the automated Library Control System (LCS). It also encouraged the

Libraries' participation in cooperative inter-institutional preservation efforts.

THE CURRENT STATE OF PRESERVATION TECHNOLOGY

In the broad definition of the term, "preservation" is any activity associated with maintaining library materials for use either in their original form or in some other usable format. It includes any activity which extends the life of library materials. From this definition it is clear why the enhancement of the physical environment in which materials are stored and improvements in the way those materials are handled are important to the preservation of library collections.

Preservation or conservation "treatments," on the other hand, are narrower interpretations of the term, and include techniques which improve the permanence and/or durability of an individual item, or which provide a stable reproduction of the item. Single-item conservation treatments are available for the repair or restoration of specific items in the collections. Because these treatments are very costly and labor-intensive, they are not appropriate for large quantities of embrittled texts.

Unfortunately, few techniques exist for the inexpensive treatment of mass quantities of deteriorating or unstable materials. The primary technique that is currently available for the preservation of informational content of texts is preservation microfilming. This is currently the proven, cost-effective method of preserving embrittled texts, or texts on unstable papers. It is by no means cheap, with per-volume costs averaging about $50. The Libraries is not currently using this technique for its general collections, although the University Archives has been employing it for some years for preservation and records management. A modest "pilot" preservation microfilming and archival photocopying project in the Libraries is being carried out during fy1986/87.

Other techniques which are the subjects of current research are mass deacidification, strengthening of brittle papers, and mass optical disk storage. Each provides considerable promise, and each is some years away from practical application on a national basis. "Mass deacidification," the process used to neutralize the residual acids in book papers, is being implemented only at the Library of Congress and at the Public Archives of Canada. When it becomes more generally available, perhaps within the next three to five years, mass deacidification will probably be the cheapest alternative for the preservation of paper-based materials, with an estimate treatment cost of about $5 per volume. It is important to stress that while this technology is not useful for materials that have already become embrittled, it is the most cost-effective technology for treatment of more recent (that is, not yet brittle) imprints.

Optical disk technology shows particular promise for compact storage and retrieval of information. It currently promises exceptional use characteristics, including random access, simultaneous use by several people, and ability to be linked directly to automated bibliographic systems. However, the preservation capabilities of this technology are far from fully understood, and no standards have been developed for preservation purposes. Further research and testing will be necessary before this promising technique will be ready for widespread preservation applications.

SUMMARY OF THE PRESERVATION STUDY TEAM'S RECOMMENDATIONS

The Preservation Study Team's thorough examination into the current condition of the Libraries' collections, their storage conditions, the way in which materials are processed and used, the degree of staff/user awareness, the collection development components of preservation, and the present level of preservation activity revealed a preservation challenge that can be dealt with if the University and the Libraries take immediate action. After careful evaluation of available options, the Study Team has recommended that a number of actions be taken in efforts better to preserve the OSU Libraries' collections.

The recommendations range from simple but effective solutions requiring little commitment of resources to the implementation of new programs or building improvements requiring substantial funding, capital and ongoing. The commonality shared by all these recommendations is that all would enhance the longevity, access and usefulness of the Ohio State University Libraries' collections to the University and the larger scholarly community. It is obvious that not all recommendations can be carried out at once. Instead, they are intended to serve as goals for the University and the Libraries into the 1990's.

The Study Team, while recognizing that all the recommendations are important, wishes to call particular attention to five areas.

- A comprehensive written Collection Management and Development Program to guide preservation policy in the Libraries is most urgently needed. In the extensive collections of any research library it is very difficult, if not impossible, to make decisions about preservation policy in the absence of clearly defined collection policies.

- An extensive, active preservation replacement program is essential given that a significant portion of the collections is deteriorated. This program will require many of the Libraries' personnel physically to identify, handle, and make preservation decisions on tens of thousands of individual brittle or otherwise deteriorated volumes. Preservation replacement must include the purchase of the same texts in reprint editions, or, more often, the copying of these texts by the use of microphotography or xerography. This effort will require much time from already busy people, significant moneys, and (as soon as possible) the beginnings of the preparation of the above-mentioned collection management and development policies.

- An intensive preservation education effort is clearly needed, aimed at all who handle or use the Libraries' collections. This effort must stress that preservation is everyone's concern. This state of mind must permeate the thinking of all library personnel.

- The physical environments that house the collections must be improved. Temperature, relative humidity, light, dust and dirt can all have a quiet, but negative impact upon the longevity of the collections. Similarly, poor building maintenance can result in what would otherwise be preventable disasters and can encourage inappropriate behavior by library users.

- Conservation and restoration treatments are needed for rare and unique items in special collections as well as many in the general research collections. A significant beginning has been made in repairing and protecting items in the general collections, but the Libraries has not yet adequately addressed the treatment of its rarities and treasures.

* * * * *

The summary of recommendations that follows is grouped into four broad categories, further divided for specificity. The full text of the recommendations is included as Section IV of this Final Report, with an Implementation Schedule, Section V, following.

The physical environments in which the collections are housed

The Preservation Study Team recommends the following in response to problems associated with the environmental conditions prevailing in the diverse buildings in which the Libraries' collections are housed. Fundamental to the Libraries' ability to effect any substantial improvements is close and persistent contact with the Offices of Physical Facilities, Campus Planning, Energy Management and other appropriate University offices.

1. Improve air quality (temperature, relative humidity, particulate levels) in campus libraries
2. Control the damaging effects of natural and artificial light
3. Improve emergency preparedness and fire prevention
4. Construct an appropriate storage facility for the collections
5. Improve general housekeeping and building maintenance in all campus libraries.

Collection management and development policy

In the Ohio State University Libraries, where the quantities of deteriorated materials are currently greater than the Libraries' capacity to treat or replace them, the processes of selection for treatment is critical. The selection process, and indeed the entire preservation effort in the Libraries must be driven by collection management and development policies.

1. Develop and implement a comprehensive Collection Management and Development Policy to define and establish collection policies and priorities.
2. Establish formal informational communication links among appropriate selector/bibliographer constituencies regarding collection management/development issues.
3. Develop a library-wide preservation policy.
4. Develop an explicit policy that defines what constitutes "rare" or special materials in the general collections that require a

segregated, protected environment.

5. Implement standard procedures for selection of and decision-making about preservation treatments.
6. Design and implement enhancements to the Library Control System (LCS) for preservation management.
7. Continue to pursue cooperative preservation efforts locally, regionally, and nationally.
8. Investigate and pursue all possibilities for securing funds for preserving the collections.

Preservation and conservation treatments for the collections

Because a significant portion of the Libraries' collections are embrittled or otherwise damaged, it is imperative that a comprehensive set of treatment options be available for selectors/bibliographers as they choose materials to be preserved.

1. Establish a preservation microfilming program, utilizing a microform service agency, to reformat brittle paper-based materials.
2. Institute a preservation xerography program to copy embrittled texts onto stable alkaline ("acid-free") papers.
3. Expand preservation microfilming in the University Archives.
4. Continue to monitor the development of new technologies and their evolving preservation applications and standards.
5. Modify practices and policies that affect first-time commercial binding of serial and paperbound materials in the collections.
6. Expand the capability for providing routine book repair, and other routine conservation treatments for the general collections.
7. Make conservation supplies (and training in how to use them properly) more readily available to all libraries.
8. Perform a detailed needs assessment for all special collections to identify treatment needs and priorities.
9. Establish a conservation treatment facility to perform full conservation (restoration) treatments for items in the Libraries' special collections.
10. Until an in-house facility for full conservation treatment is available, contract with an outside facility for such specialized treatments.

Staff training, handling, shelving, and display of the collections

The handling and usage of the Libraries' collections, taken with the fragile nature of the materials themselves and the type of physical environments in which they are stored, is a central factor in the long-term survival of individual items and the collections as a whole. With this study's conclusions that there is no substitute for staff and user awareness and vigilance and that preservation is the concern of everyone, these recommendations follow.

1. Develop and offer on an ongoing basis training programs for Libraries' faculty, staff and student assistants.
2. Disseminate preservation information and procedural documentation throughout the Libraries.

3. Heighten awareness among the Libraries' users in order to encourage appropriate habits in the handling of the Libraries' collections.
4. Purchase or upgrade support structures (shelving, book supports, book trucks, etc.).
5. Improve the routine handling and processing of materials.
6. Phase-out stand-alone, external after-hours book returns.
7. Improve the Main Library Skylight exhibit area exhibit cases and physical environment.
8. Further restrict the consumption of food and beverages in the Libraries.

II. Introduction

A. The OSU Libraries in their institutional setting

The Ohio State University: The Ohio State University was established in 1870 as the Ohio Agricultural and Mechanical College, created as a direct result of the Land Grant College Act of 1862. Today the University is a large and complex organization, consisting of the central Columbus campus, four regional campuses, the Agricultural Technical Institute and Ohio Agricultural Research and Development Center, the Cooperative Extension Service, and auxiliary enterprises, such as the University Hospitals. Ohio State offers degree programs in a wide variety of disciplines, including undergraduate and graduate programs in the liberal arts and sciences, in agriculture, in numerous professional areas, and in the health sciences. Total enrollment of the University is over 56,000, with over 53,000 students on the Columbus campus. OSU is also one of the largest research-oriented universities in the nation, and supports numerous research centers and institutes with the assistance of federal, state and private funds.

Generally stated, the University's fundamental goal is to enhance the quality of human life by developing the individual's capacity for enlightened understanding, thinking, and acting. The University strives to achieve its goal by pursuing excellence in three missions: teaching, research, and service.

The Libraries: The Ohio State University Libraries' goal is to participate in and to support the University's teaching, research, and service missions to the best level that human and material resources will allow. The Libraries and its collections –– which are organized and maintained in order to support these missions –– provide direct and specific services primarily to the students, staff and faculty of the University.

Initially established in 1873 with an assemblage of gift volumes in agriculture, science, and law, the Libraries' collections have expanded to over four million volumes. The volume holdings are supplemented by 2.6 million microforms and tens of thousands of items in a variety of other formats. The collections are housed in the William Oxley Thompson Library (more commonly referred to as the Main Library), and in twenty-nine collections located outside the Main Library.

The research collections are extensive in the breadth of subject coverage and are recognized as having significant strengths in many and varied areas. Special collecting areas include American fiction, microform masters of medieval and medieval tradition manuscripts, original cartoon and comic strip collections, original photography materials and numerous manuscripts, first editions and modern facsimile editions of significant titles. Other collections of special value include German Reformation studies, history of botany and plant taxonomy, law, sheet music, pharmacy, astronomy, and polar studies. The general arts and sciences collections support not only the University's programs but also provide significant resources for the national scholarly community, with the OSU Libraries serving as the eighteenth most voluminous interlibrary lender according to the 1984/85 ARL Statistics. The Ohio State University Libraries' system is the largest in Ohio, and serves as a lender of last resort for the state.

The Libraries' collections include a wide variety of formats. In addition to books and serials, there are maps, newspapers, microforms, video cassettes, slides, a variety of sound recording formats, and other media formats. The Libraries anticipate increasing levels of acquisition of computer software and other material in machine-readable formats within the near future. Each of these formats has inherent physical strengths and weaknesses and each requires specific and different conservation and preservation measures in order to maintain them as a continuing part of the collections.

The Libraries' concern for continued access to research collections through preservation efforts: The research collections of the Ohio State University Libraries reflect the history of the institution and are a key to its future. The collections are a legacy and are, in fact, among the largest of OSU's investments. The monetary value of the collections — if indeed a dollar value can be assigned, since much of the collection could not be readily replaced — certainly approaches $250,000,000, excluding the value of the special collections. When this is considered, preservation efforts in most cases appear cost-effective, when weighed against the alternatives.

The Libraries recognize its obligation to provide ready access to materials in the collections and information from them. The considerable and alarming degree of deterioration that the collections have suffered and may continue to suffer diminishes the ability to provide that access. Preservation is a critical issue for the Libraries because it has a direct impact upon the quality, indeed the survival of the collections, given the fact that virtually all are threatened by a combination of chemical, physical, economic, and biological factors.

During the last decade research libraries in North America have recognized that their collections are seriously endangered by a combination of damaging environmental conditions, heavy or improper handling, and the declining quality of the materials themselves. Surveys completed in several major research libraries since 1980 show that that major portions of their collections have deteriorated to the point that they cannot be consulted by readers. The Yale University Library has found, for example, that 37% of its book collections are embrittled; and, studies by the New York Public Library and the Library of Congress show similar results for their collections.

At the Ohio State University, the concern of the University Libraries for preservation of the collections has been outlined in the Director of Libraries' annual reports since 1979. Each reference to the need for preservation action has been made in the context of fiscal constraints. Nevertheless, several important milestones in the development of a preservation program are noted in these annual reports: the replacement of back runs of a select number of journals in hard copy with microform copies, undertaken for reasons of both preservation and space conservation; concurrent use of microfilm replacement for over eight hundred current serial titles in lieu of binding; the phase-out of a costly inhouse bindery and subsequent transfer of those funds to the commercial contractual bookbinding budget; the elimination of vending areas for food and drink in the Main Library's public areas, done in conjunction with the establishment and enforcement of a no-food-and-drink policy in public areas of the Libraries; and, plans for employment of a trained preservation specialist and the beginning of a preservation program for the entire library system.

In June 1984 consultants Carolyn Morrow and Sally Roggia, from the Midwest Cooperative Conservation Program, visited the Libraries and provided several recommendations, both verbally and in written form. By this time, plans to recruit a trained preservation officer were well underway. A Preservation Officer was selected in the summer 1984 and began his duties in mid-November 1984. The Preservation Officer's first annual report to the Director of Libraries was submitted in February 1985.

Concurrently, in August 1984 the Libraries applied to the Association of Research Libraries' Office of Management Studies (ARL/OMS) to be one of ten demonstration sites for its Preservation Planning Program, an "assisted self-study process" sponsored in part by the National Endowment for the Humanities. This self-study process was sought in order to assist the Libraries Administration and the newly-appointed Preservation Officer in defining and establishing a preservation program for the Libraries.

B. The ARL Preservation Planning Program

The Process: The Ohio State University Libraries was awarded a grant by the Association of Research Libraries' Office of Management Studies in November 1984 to undertake an assisted preservation self-study with the objective of formulating a Preservation Planning Program (PPP) and preparing a set of recommendations tailored to the Libraries' goals and objectives. This planning program was designed by ARL/OMS to incorporate technical and procedural information about the phased development of a comprehensive program to preserve research library collections. The planning and self-study processes are based upon the assumption that the faculty and staff of the OSU Libraries, with the assistance of ARL/OMS staff, are best suited to study and identify its preservation situation and needs. The self-study involved the libraries on the Columbus campus only. The Health Sciences Library and the Law Library were invited to participate.

The Charge: In preparation for the Preservation Planning Program the Director of Libraries reviewed the available documentation on the process, consulted with University and library faculty and staff concerning the operation of the program and then selected members to serve on the

Preservation Study Team. He charged the Study Team to develop a well-organized and effective preservation program for the Libraries by studying the following areas:

- the physical environments of the collections,
- the condition of the collections,
- disaster and emergency preparedness,
- organizational implications of preservation,
- preservation education and awareness, and
- resources and collection development as they relate to the preservation of the collections.

Methodology: The Preservation Study Team was responsible for directing the self-study process and for writing this Final Report. This eight-member Study Team was composed of six Library Faculty members, one Administrative & Professional staff member and one Classified Civil Service staff member drawn from various key organizational units within the OSU Libraries. The Preservation Officer chaired this Study Team.

The Study Team guided the ARL/OMS assisted self-study process into its three distinct but interrelated phases:

Phase I: This initial phase of the study began on October 9, 1985 with the first of three site visits to the OSU Libraries by ARL/OMS consultant Barbara Lockett. The consultant reviewed the basic issues and methodology of the ARL/OMS process, citing the guiding importance of the program's Manual and its Resource Notebook. A nine-month time frame was established with June 30, 1986 set as the target date for submitting the Preservation Study Team's final report to the Director. A budget of $1,000 to cover direct outlays was set up, provided by ARL/OMS as an operating budget for the study.

The Study Team concluded this first Phase of the study with the completion of an Interim Report. This paper served as a working document intended to provide background information on the Libraries in its institutional setting, the external factors affecting the Libraries' preservation efforts, the preservation history of the Libraries, and a statement of the initial planning assumptions for the preservation of the Libraries' collections. This Interim Report was distributed to the Libraries' Administrative Staff Conference, and to the participants of Phase II of the self-study.

Phase II: This data-gathering phase, the heart of the self-study process, required the creation of six investigative task forces, with a total membership of thirty-eight library faculty and staff. Members of the Preservation Study Team chaired or co-chaired these six task forces. Volunteers were solicited for each task force with the intention of selecting personnel from a wide variety of the Libraries' units. This phase of the study was met by an enthusiastic response by the Libraries' faculty and staff. (See Appendix 1 for a list of task forces membership.)

The task forces were given specific charges by the Director, drafted by the

Study Team, in the areas of: the physical environments of the collections; the physical conditions of the collections; emergency and disaster preparedness; organizational implications of preservation; preservation education and awareness; and resources/collection development/preservation in the OSU Libraries.

Phase II concluded with the third and final visit of the ARL consultant Lockett on April 23, 1986. On that day final reports were submitted to the Study Team, and a two-hour meeting was held for each Task Force to report on its methodology, findings, and preliminary recommendations. Subsequently, task force members were discharged with thanks from their task force assignments.

Phase III: Phase III began immediately with the third and final visit of the ARL consultant. Recommendations of the task forces were circulated to the Director, Assistant Directors, members of the Administrative Staff Conference, and to any other library faculty or staff who requested a copy from the Preservation Study Team. This final phase of the self-study consisted of synthesizing the reports of the six task forces, determining the format of the final report, and in preparing the Study Team's recommendations and timetable for phased implementation. The Preservation Study Team concluded its charge by submitting its final report to the Director of Libraries in September 1986.

C. Planning Assumptions

The Preservation Study Team outlined the following primary planning assumptions in undertaking this study and in writing this Final Report:

- Preservation of the collections is essential to fulfilling the mission of the OSU Libraries. Many of the Libraries' holdings are deteriorated or are composed of unstable paper-based materials for which there is no simple or inexpensive preservation remedy. The collections will continue to deteriorate, in some cases at a rapid rate, unless the Libraries can significantly expand its present efforts. Failure to act could result in the loss of these information sources to the Libraries' patrons and the larger scholarly community. While the Libraries will continue to collect materials in many formats, the greatest challenge is the preservation of older paper-based collections.

- A commitment to preservation activities has already been made by the Libraries in several areas, the most important of which is the establishment of the Preservation Office with the attendant appointment of staff and purchasing of supplies and some equipment. In addition, several new buildings are planned and a number of existing library facilities is to be improved. The Libraries' faculty are participating in state and regional preservation networks and are actively seeking to increase and enhance cooperative efforts.

– Institutional fiscal constraints are a major factor affecting preservation efforts. However, the University Libraries has shown strong commitment to preservation efforts thus far, and the University Administration has expressed definite interest, thus there is good reason to be optimistic regarding funding for a preservation program. It is assumed, however, that increased preservation efforts are contingent on substantial increases in available funds, and that requests for funding must be competitive with other program initiatives throughout the University.

– Although the decentralized nature of the Libraries lends itself to the development of site-specific practices in many areas, participation in preservation activities will be system-wide, including all units of public and technical services, user education and automation.

– Emerging optical/digital technologies are already making an impact upon the OSU Libraries' information services. It must not be assumed, however, that these technologies will — cheaply, easily or quickly, if ever — "solve" the preservation problems presented by the great quantities of items in older paper-based collections.

D. Definition of terms

In this report the following terms will be used with these respective definitions:

> "Preservation" is a set of tasks associated with maintaining library and archival materials for use either in their original form or in some other usable manner. Preservation activities are intended to provide protection for, and continued availability of, items that are now in, or being added to, research library collections.
>
> "Full Conservation Treatment," sometimes referred to as "Restoration," typically includes documentation of the original condition of an item, chemical stabilization of its paper, and preserving the item as an artifact (e.g. duplicating a historical sewing structure or saving fragments of the original materials with which it was constructed). It is usually given to items of significant rarity or value by highly-skilled individuals or by technicians directly supervised by professional conservators. Sometimes format or use will dictate extensive treatment of items that do not have significant rarity or value (but without documentation or retention of fragments). Such extensive treatment is considered to be full conservation treatment.
>
> "Routine Conservation Treatment" or "Collection Maintenance" is intended to extend the useful life of materials without returning them to their original condition. It is normally applied to materials that are valuable for their contents, but that do not have significant rarity or value. Typically, routine conservation treatment procedures are performed on a mass production basis by trained paraprofessionals and include such activities as book repair, paper mending, and pamphlet binding.

"Mass Deacidification" is a process by which a whole book (as opposed to individual leaves) is treated in a chamber to neutralize acidity and introduce an alkaline buffer that will help prevent future acid attack from the environment. It is typically performed on a mass production basis for whole collections or major subsets of collections in a chamber that can hold a large quantity of items. It has been recognized that it is the acidity in modern (post-1850) book papers that is a primary cause of deterioration.

"Commercial Binding" consists of binding and related activities, such as recasing, performed for a library under contract by an outside organization, typically a commercial library bindery.

"Protective Enclosure" is a conservation or collection maintenance treatment that protects vulnerable or fragile library materials from damage by providing a simple wrapper, portfolio, or "phase box." It also includes the use of enclosures to protect materials with artifactual value. Enclosure can be considered a holding activity or "phased treatment" for materials that are to be retained in their original format, but for which other conservation treatment is not feasible in the near future.

"Preservation Microfilming" includes preparation of materials for filming, production of microforms, and subsequent disposition of both film and materials filmed. Technical and quality control considerations include observance of preservation standards for film stock, production, and storage. First-generation microforms that have been manufactured, produced, and stored in accordance with preservation standards are called preservation microform masters.

This study has examined the application of preservation, conservation, preservation microfilming, mass deacidification, and other actions that might be taken for the OSUL collections.

E. Preservation efforts to date in the OSU Libraries

With the appointment of a full-time Preservation Officer in November 1984, a formal preservation program was in fact begun in the Libraries. Currently (September 1986) the Preservation Officer reports to the Director of Libraries and advises the Libraries Administration on preservation issues as he works on his charge of designing and implementing a comprehensive preservation and conservation program for the OSU Libraries.

The current organizational structure of the Preservation Office includes two units, the Collection Maintenance Division and the Bindery Preparation Division. Both are supervised by the Head, Collection Maintenance and Bindery Preparation, an Administrative and Professional position which reports to the Preservation Officer. (See organization charts, Appendix 3.)

The Bindery Preparation Division is responsible for the preparation of materials to be bound by the Libraries' commercial bindery. The Law Library and Health Sciences Library are administratively separate from this operation. Bindery Preparation has a staff of five FTE (classified civil service) supplemented by approximately 1.0 FTE student assistants. This in turn is supplemented by work done by staff in all public service locations in gathering materials for binding. In fy1985/86 over $224,800 was spent in binding 45,414 items. The Law Library spent $10,377, binding 1630 volumes; and Health Sciences spent $17,997 to bind 3,969 volumes. In total, all units of the libraries spent $253,174 to bind or rebind some 51,013 volumes — a primary protection or "first line of defense" against the rigors of life in the library.

The Collection Maintenance Division was created by a reorganization of the Bindery Preparation Division in mid-1985. Collection Maintenance has a staff of 5.6 FTE (classified civil service) and about five FTE student assistants. It is responsible for routine conservation treatments ("mending," "book repair," etc.) and for most of the shelf preparation (labeling, property stamping, etc.) in the Libraries. Its current operations include:

- custom-made protective enclosures — "phase boxes," etc. —approximately 6,000 annually;
- in-house pamphlet binding — approximately 5,000 annually
- structural repair of general collection books — currently about 1200 annually;
- screening damaged or deteriorated materials sent from public service units — primarily from Main Library Circulation thus far;
- temporary binding — approximately 2200 volumes annually;
- labeling and shelf preparation — approximately 75,000 items annually;
- salvage of water- and fire-damaged materials — at least 200 per year, and at times over 2,000;
- miscellaneous other routine repair and conservation operations, including copying, tipping-in replacement pages, inserting pockets, trimming/opening uncut volumes, encapsulation of flat items in polyester film, and others.

In addition, the Collection Maintenance Division operates four hygrothermographs that monitor, on a continuing basis, the temperature and relative humidity in selected libraries.

As noted above, most of the materials repaired or treated in the Collection Maintenance Division have been routed from the Main Library Stacks collections. In October 1986, a quota system will be in place to allow all locations to forward materials for the various treatments described above.

A "pilot" preservation replacement ("brittle books") program is also being conducted through this unit, involving a staff member from the Monograph Acquisition Division (at 1/2 FTE), the Preservation Officer, and a number of selectors/bibliographers. This "pilot," while modest in scope, will assist in establishing a workable methodology for making preservation decisions on brittle volumes.

Outside the organization of these two preservation units, which provide preservation or conservation treatments of materials, much remains to be done. As a good example, little has been accomplished in the area of "outreach" to raise the awareness of Libraries' personnel and users of the Libraries. The completion of this preservation self-study will provide the goals and objectives (and the time) for these and other efforts.

The OSU Libraries and "The Guidelines for Minimum Preservation Efforts in ARL Libraries"

Technically, the OSU Libraries currently meets the ARL's "Guidelines for Minimum Preservation Efforts in ARL Libraries," a document adopted by ARL in 1984, which taken together constitutes a baseline of preservation efforts. The "Guidelines" cover the following five areas, provided here with commentary on how Ohio State currently measures up:

1) "A local program statement" is required, a document defining the libraries preservation goals and objective together with a statement of current and prospective preservation activities. At Ohio State, the Preservation Planning Program's documentation (Background Paper, task force reports, and this Final Report) provide the groundwork for this purpose.

2) "Statistics" should be regularly compiled documenting the annual preservation activities (in FTE staff, binding expenditures, items repaired, etc.) These figures are maintained by the Preservation Officer; the Libraries participated in the ARL's pilot preservation statistics questionnaire for fy1984/85.

3) Efforts at "national participation" encourage ARL libraries to be part of the coordinated national preservation effort in preservation microfilming. These guidelines, which are to be followed by the Libraries in its above-mentioned "pilot" preservation microfilming project, mandate non-duplication of other institution's filming efforts, adherence to archival standards for filming, and the contribution of bibliographic records for master films to national sources.

4) The ARL Guidelines concerning "environmental conditions" are being met only in a few areas within the Libraries at Ohio State. The Guidelines state that "materials in all collections that are unique in the library, and those for which a primary collection responsibility as part of national collection coordinated effort has been assumed, should be housed in an environment that is filtered and air conditioned such as to temper the natural extremes of temperature and humidity."

5) The Guidelines state that "current budgetary efforts" in ARL libraries should allocate at least 10% of its materials or 4% of its overall budget to preservation. These figures are admittedly somewhat subjective, but are meant to "provide a rough characterization of what may be relatively strong and vigorous, yet in need of improvement and possibly less that the institution can achieve with some additional effort." The OSUL has met (but only recently) this particular "minimum guideline," and is spending over one-half million dollars annually in preservation efforts. It has by no means reached a realistic optimum which will ensure that the collections will be maintained in

a usable condition. The extent of deterioration in the collections is of an overwhelming magnitude — the OSUL must set the appropriate high goals and standards to meet the needs.

As this Final Report and its recommendations show, there is much preservation work ahead of the Libraries at Ohio State.

III. Key Areas of Concern: A Summary of the Major Findings of the Self-Study's Six Task Forces

A. Task Force 1: The physical environments of the collections

Deterioration of library materials may be defined as the decrease in the ability of that material to fulfill its intended purpose of transmitting information. The simultaneous effects of chemical, physical, and biological agents — heat, humidity, light, fungi, insects, particulates, and air pollution — are significant factors in the deterioration of library collections.

Temperature has a direct effect on the longevity of materials. The rate of chemical reactions changes logarithmically as a function of temperature with the rate of chemical reactions in cellulose (paper and cloth) doubling for each 5°C (9°F) rise in temperature. In other words, all other factors being equal, paper-based library materials stored at 70°F will endure twice as long as those stored at 79°F.

Relative humidity levels affect the expansion and contraction of the complex physical components of books and other library materials. Fluctuations in both temperature and relative humidity compound these stresses. High relative humidity levels (above 65%) increase chemical activity and hasten deterioration and can encourage the growth of fungi. Low humidity levels (under 20%) can increase dessication and embrittlement.

Light can be the most potent of all chemical and physical agents of deterioration, depending upon the its wavelength, intensity and duration.

Particulates — dust, dirt, smoke — tend to soil, abrade, and facilitate the actions of water vapor and biological agents. Because dust and dirt are hygroscopic, a film of dust and dirt will maintain a higher moisture level on a surface and will act as a medium to fungal growth.

Insects — roaches, silverfish, termites, etc. — ingest paper, cloth, vellum, parchment and leather, and are especially problematic with gifts and collections of older material.

The Libraries' collections on the Columbus campus are dispersed among 48 separate areas and reading rooms in 25 different buildings. Each building varies significantly in age and condition, with many libraries housed in facilities not originally designed for that purpose. The buildings that house libraries range from the Geology Library in Orton Hall built in 1893, to the Health Sciences Library built in 1973. Several libraries have been renovated since 1973, for example, 1977 for the Main Library, 1983 for the Agriculture Library, and 1984 for the Biological Sciences Library. Most libraries outside of the Main Library and the Health Sciences Library are more or less tenants in their buildings. In these cases they have little or no control or influence over climate conditionings, repairs, and daily general maintenance of their locations. Each building housing a library has a building coordinator, but only in Main and Health Sciences is this person a member of the Library staff.

The charge: In investigating the environments of these many libraries the Task Force on the Physical Environments of the Collections (Task Force 1) worked under the basic assumption that the collections of the University Libraries will remain, for the foreseeable future, physically dispersed to a large extent. This assumption was made despite the fact that a certain amount of consolidation (e.g., the science-technology library) is planned for the near future.

Methodology: Task Force 1 developed a questionnaire to survey current environmental conditions in all of the libraries on the Columbus campus. Library faculty and staff in each location supplied information on its building construction or renovation, and indicated what he/she considered that library's "most urgent" preservation issues. Physical Facilities staff were contacted to provide other needed information.

The Task Force developed a second questionnaire to survey the level of housekeeping, kinds of equipment housed in each locations, shelving construction, book drop usage, and other related concerns. All of the data obtained was used to compose a document to provide a general description of the Libraries' facilities, an important part of this Final Report.

Since time constraints would not allow the Task Force to monitor with scientific instruments all library locations to provide meaningful data for each, several libraries were selected as representing what was estimated to be best-, middle-, and worst-case areas. Hygrothermographs were used in these selected libraries to measure and record temperature and relative humidity levels. In addition, charts were kept of relative humidity and temperature readings while making note of the daily temperature highs and lows and the general weather conditions from the U.S. Weather Service. Light levels were measured with a standard photographic light meter and a Crawford UV light meter. Light level readings were made also in selected display case areas. Finally, the Task Force provided an intensive examination of four selected libraries: the Business (formerly Commerce) Library in Page Hall, the Engineering Library in Caldwell Lab, the Health Sciences Library, and the Main Library. The Task Force also investigated several other factors, including potential for water damage to the collections, shelving structures, space requirements and general maintenance/housekeeping.

The results: Department libraries outside the Main Library range in size from 986 square feet (Topaz) to 35,100 square feet (Undergraduate). (All figures are net assignable square footage.) The Health Sciences Library has 52,600 square feet, Law 33,168 square feet and Main has a total of 210,495 square feet. These figures do not reveal the environmental complexities that result from architectural variations and building ages in each location. The Main Library, for example, utilizes fifteen air handlers serving a system divided into numerous zones that often produce wildly varying results. (Main is currently undergoing a major HVAC renovation; although it will not affect all areas of that building, it will significantly improve the environment of the Stack Tower and several other zones.) Several libraries — among them Business, Geology, Perkins, and that at Stone Laboratory — have no air conditioning systems.

Heating, Ventilation and Air Conditioning: National standards call for an ideal temperature of 65° F ± 5° F for storage of paper-based materials; relative humidity levels should be 50% ± 5%. There should be a minimum of six air changes per hour. Air handling systems should provide for the filtration of particulates (dust) to remove 90% of 1-micron particles and 50% of particles between 0.5-1 micron; they should also provide filtration to remove other pollutants including sulphur dioxide, sulphuric acid and ozone.

The Task Force monitored the temperature and relative humidity in the following areas:

- Special Collections stacks (327 Main Library). This area is equipped with an independent Liebert HVAC system. The Task Force considered this a "best-case" environmental area since the system provides one of the better HVAC systems currently in the OSUL.
- Deck 5, Main Library Stack Tower. This area is affected by the Main Library's HVAC system (now under renovation). The Task Force considered this a "middle-case" environment.
- Business Library stacks in Page Hall. This is controlled by the system in Page, with no cooling capability or humidity controls in the summer. This was considered a "worst-case" environment.

Hygrothermograph monitoring has been maintained in the above areas for nearly a year by arrangements made by the Task Force and the Preservation Office. Readings from these areas provide useful data through the full range of seasonal variations.

The Task Force also monitored the Health Sciences Library and the Engineering Library for extended periods, to provide additional data on middle-case environmental conditions.

Temperature and relative humidity data kept by the Task Force indicate that none of the physical environments monitored by the Task Force currently adheres to the national HVAC standards for library temperature and relative humidity. Temperatures are consistently above the recommended high level of 70 degrees in every season, with significant seasonal variation to above 80 degrees or even higher. Relative humidity is largely uncontrolled in all areas, with swings from the 20% r.h. range in the heating season to over 70% r.h. in the summer and inter-seasonal periods.

The Task Force noted with concern the consistently high temperature in the monitored locations. But of even more concern to the Task Force was the damaging effect on the Library collections of "cycling," i.e., the wide fluctuations in both temperature and relative humidity that take place diurnally and/or seasonally.

Rare Books stacks did prove to have the best environment of the monitored areas. During one year's time the temperature reached a high of 80° and a low of 64°; relative humidity fluctuated during that time from a high of 66% to a low of 32%. Daily fluctuations in temperature seem to fall within a ± 5° range or less, but daily relative humidity fluctuations are often within a 6-10% range. Given that this is a special collections stacks area, the Task Force noted that its environment was not as "ideal" as it could be. Temperature should be consistently around 65° and there should be minimal fluctuation in either temperature or relative humidity.

On Deck 5, Main Library Stack Tower the year's high was 84°, with a low of 68°. Relative humidity fluctuated from the year's high of 74% to a low of 21%. Temperatures generally remained stable on a day-to-day basis, with little diurnal fluctuations except in the spring and autumn heating-to-cooling transition periods. Relative humidity fluctuations, however, were often very pronounced, with 20% swings common in a single 24-hour period. The Task Force noted the chronic problem of temperatures that are too high, and with relative humidity levels that have in the past been conducive to mold growth. The Task Force was hopeful that the renovations in the Stack Tower's HVAC system would rectify most of these problems.

The Business Library's bookstacks area reached a high temperature of 94°F and a low of 64°F during the year. Relative humidity variations spread from a high of 66% to a low of 25%. On a daily basis this collection's temperature often varied 20° in a single 24-hour period, with relative humidity fluctuations of 16% common. The Task Force noted the harmful effects of this largely uncontrolled environment on the collection.

The cycling noted in these libraries — but prevalent throughout the entire library system — is a result of a number of factors, among them inadequate building insulation or window glazing, underused HVAC equipment, and campus energy conservation guidelines that mandate "cycling" of HVAC systems overnight and on weekends to save energy. Of these factors, the Task Force noted that the energy-saving "cycling" guidelines are the most harmful to library collections.

Although the Task Force did not do a formal measurement of particulate filtering in the Library, from the observations made by the Task Force and the comments received from department librarians and bibliographers, their conclusions are that particulate filtration is largely ineffective. Levels of pollutants in library environments (sulphur dioxide, sulphuric acid, ozone) were not measured.

Light: Research has established that paper-based library materials should not receive levels of light radiation higher than 75 watts lumen from either natural or artificial sources. The Task Force found thirty different OSU libraries that have windows in their stack areas, allowing unfiltered sunlight to fall directly on books or other library materials. Ultra-violet (UV) light — the most damaging type of radiation for library materials — should never exceed 37,500 microwatts per square meter in book storage areas. Yet, the Task Force discovered sunny-day readings in the Business Library as high as 625,000 microwatts per square meter, and readings of 16,000,000 microwatts per square meter in Main Library stacks. Readings taken in other locations, while not as dramatically high as these two, were far above the recommended levels. Bookbindings and coverings in many areas show evidence of fading and discoloration — evidence that oxidation is taking place and will eventually affect the books' paper as well. The Task Force noted that some areas are equipped with shades or blinds to block direct or indirect sunlight; it also noted that such devices are not uniformly utilized in those locations.

Nearly all of the libraries have fluorescent lighting, a form of illumination very high in UV concentrations. The Task Force found that only in the Library for Communication and Graphic Arts was this form of light filtered to remove the harmful rays. All other locations, including the Special Collections reading room, use unfiltered fluorescent lamps. The Task Force noted that stacks lighting, generally fluorescent, frequently remained "on" in stack locations, often because of the limited number or absence of switches in those locations.

Ultra-violet light levels in display cases were measured in the Main Library Skylight Exhibit area (80 microwatts per lumen), Health Sciences (100 microwatts per lumen), Home Economics (100 microwatts per lumen) and Topaz (200 microwatts per lumen). No display cases are equipped with UV-filtering devices. Since recommended levels are 75 microwatts per lumen or less, all readings exceed the maximum recommended levels. In the Main Library Skylight area, direct sunlight falls upon the exhibited materials during the months of May, June, July and August. During these summer months the direct sunlight provides illuminance levels of as high as 10,000 lux (930 ft. candles). Such high illuminance levels together with the attendant UV component, provide a damaging environment for exhibited materials.

Shelving: Clearly, one of the most urgent problems is the overcrowding of the collections in stack areas. Overcrowding of books — a situation that exists in nearly every library — leads directly and indirectly to damage of the materials. Lack of shelving space discourages proper shelving practices, or makes them nearly impossible, as in the case of shelving oversized materials on their fore-edges, rather than on their tail-edges. Lack of space restricts easy access to materials and restricts air circulation. It mandates frequent shifting of whole or large portions of the collections, which causes additional wear and tear on the materials. The Task Force found from their survey a shortage of appropriate book supports and step stools for the collections. They found the need in all libraries for standardized guidelines for shelving for use by stack maintenance staff. These topics were also investigated by other Task Forces in the study, and are outlined below.

Housekeeping: One of the major concerns and areas of complaint from librarians was that of general facilities maintenance and housekeeping. Most of the libraries reported below-average housekeeping and problems with dust. This was confirmed, too, by the Task Force's direct observation. The presence of dirt is detrimental to the collections and their appropriate use.

Other: The Task Force also investigated and made recommendations regarding real and potential damage to the Libraries' collections caused by water leakage within library buildings. These comments overlap those of the Task Force on Disaster Preparedness, and have been included in that section of this report. Similarly, their findings on book returns, book trucks, and the food/drink policies of the Libraries have been incorporated into the section on Organizational Implications, below.

Conclusion: Because of the nature, diversity and number of physical locations that house the OSUL collections, the improvement of physical environments is a substantial challenge. And, given the importance of the environment to the longevity of the collections, the Libraries must constantly seek ways in which it can realistically improve environmental conditions. Without its own maintenance crews in the buildings it occupies, the Libraries must be sure that its voice is heard in all deliberations to improve or change situations and systems in those numerous buildings where libraries are located. This will include a commitment to call constantly for services and assistance when needed.

Clearly, the problem of lack of space for the collections and patrons is paramount, and must be dealt with in the very near future.

Task Force recommendations are included in Section IV of this report.

B. Task Force 2: The physical condition of the collections

The OSU Libraries' collections are predominantly book format materials -- a collection that totals just over four million volumes, the seventeenth largest among the members of the ARL. Even though collections of modern (post-1850) books have proved to be an excellent means of providing convenient access to information and ideas, they have unfortunately not proved to be a reliably permanent or durable storage medium.

Books are essentially "machines" possessing a complex variety of physical and chemical properties. A book's textblock, the block of paper which contains the printed or written information, consists primarily of sheets of matted cellulose fibers from processed wood, cotton or linen. These sheets are held together by one of several possible leaf attachments of thread or adhesive that bind the paper leaves as a unit. An external cover provides the textblock a protection that varies from book to book in its effectiveness.

Although there is a considerable collection of rare material in many of the libraries, it must be stated that most book volumes in the OSU Libraries are not valuable as rarities or artifacts, but instead are important primarily for their informational content. This makes the paper textblock the most crucial portion of the book, and it makes the leaf attachment and covers — those components that keep the textblock intact and protected — crucial to the preservation of the contents. Herein lie the roots of the preservation dilemma for the nation's libraries: the major technological changes in the papermaking industry — beginning in the mid-1800's and continuing until the present time — have resulted in the manufacture of book papers of very high residual acid content. This acidity limits the book paper's shelf life to about 50-100 years or less, depending upon the paper's fiber content, the book's usage and the storage environment it must endure. This is short indeed when compared to the permanence and durability of books produced before the 19th century.

As with book paper, book bindings and covering materials have declined in quality. This combination of developments has had a very negative effect on modern research libraries, the institutions that have acquired these non-permanent, non-durable materials as the foundation of their collections.

In order to estimate the extent of deterioration and damage in the Libraries' collections and to obtain a better understanding of the nature of the problem, the Task Force on the Condition of the Collections (Task Force 2) undertook two separate surveys. The first involved a random sample of the Main Library Stack Tower collection. A second survey, more qualitative in nature, involved a series of questionnaires, interviews, and site visits by Task Force members to each of the separate collections that make up the OSUL. In this latter survey, each location library was examined by the Task Force, and each managing librarian/curator was consulted. The results of these two surveys are outlined below.

Results of the Main Library Stack Tower random sample

Survey Methodology: Random sampling in library collections to estimate physical condition of the collections has proven to be a very useful management tool for preservation purposes at the Library of Congress, Stanford University Library, Yale University Library, the New York Public Library, and elsewhere. Random sampling is necessary because it is impossible to examine every single item in the collections to ascertain quantitatively the characteristics of that collection. The random sample undertaken in the OSUL collections was designed to enable the Task Force to test an easily replicable and reliable methodology, and to gain quantitative information about the physical conditions of the general collections.

Due to the constraints of time and resources the Task Force decided to sample only the Main Library Stack Tower collection, which included only "MAI" location call numbers and materials housed in the Pre-Cataloging area. The Task Force originally hoped to sample other Library locations, but found that time limitations precluded this effort. A sample of 568 randomly selected call numbers was taken from the LCS (Library Control System) database, with the assumption that each call number in the OSUL "MAI" universe received an equal chance of being selected for the survey. Statistical advice was obtained from the University's Statistical Consulting Service. This sample size of 568 books provided a confidence level of 95% and a tolerance of approximately ± 4%, meaning that if another sample were done to replicate the study the results would be essentially the same 19 times out of 20. The 4% is an approximate allowance for error.

The Task Force decided to adopt the general methodology of the Yale University Library's recently-completed (1983) condition survey because of its thoroughness and its clear-cut format. Yale's survey employed a huge sample of over 36,000 items that involved 36 Yale library locations and took over three years to complete. Yale's survey differed from the OSUL survey in another way: Yale employed a direct-to-shelf selection methodology, where OSUL made use of its on-line database to select its sample. OSUL adopted with little change the questionnaire used by Yale to "ask" its sample the pertinent condition-related questions.

The OSU Main Library Stacks condition survey was intended to obtain direct and indirect information about the present and predictable condition of that book collection. Its primary aim was to gain information about the following factors:

- "Brittleness" of the paper: To what extent is the OSUL book collection embrittled? This characteristic is generally measured by a simple fold of a lower corner, an exercise that can approximate the strength and flexibility of the paper. This measurement aims to predict the amount of preservation microfilming or other reformatting the collection will require in the near future. Embrittled paper is as yet an irreversible condition; reformatting items composed of embrittled paper is expected to be a major undertaking in the OSUL preservation program.

- Acidity of the paper: What percentage of the book collection is composed of very acidic paper, paper with an expected useful life of 50–100 years or less? Generally, the more acidic the paper, the more short-lived it is. Determining the percentage of acidic books in the collection is useful for predicting long-range preservation needs; it can be useful, for example, in estimating just what portion of the collections might benefit from mass deacidification processes should they become available in the near future. The acidity was measured with a felt-tipped pH indicator pen filled with bromocresol green. The chemical is green, but turns blue if the paper has a pH of 5.4 or higher. Because 5.4 is very acidic, estimates made as a result of the survey findings are conservative.

- Condition of the bindings: In what condition are the bindings and leaf attachment structures of this collection? When matched with another question about width of inner margins, and when compared to the degree of brittleness, this factor can be used to predict what rebinding will be necessary and/or feasible in the future.

- Environmental damage: Has the collection received environmental damage from water, mold, insects, fire, etc.?; or has it received damage from mutilation/ defacement?; or, are texts torn, pages detached, pages missing, etc.?

- Age of the collection: How old is the collection? Because of the nature of papermaking technology in the past 125 years, the present and future condition of the collections can be predicted by the date of creation or publication of that material. For this reason, materials created or published in the period from 1870 to 1930 are considered by the nation's preservation professionals as the portions most "at risk" in all research collections.

- Place of publication: Where were the materials published? Country of publication, when used with date of publication, can also be a predictor of present and future condition.

- Usage: What usage has this collection received? This was measured by ascertaining if the items had circulated outside the library in the past 10 years.

The sample was taken during the first week of March, 1986, by eight two-person sampling "teams". Prior to the sampling a 2-1/2 hour orientation and training session was undertaken. A pre-test was given to establish that all participants were evaluating books with the same criteria. The sampling took approximately 65 team hours (or 130 person-hours) to complete.

Table 1: Summary of the Main Library Stack Tower Survey

		Extrapolations:			
Physical characteristic	Percentage exhibiting characteristic:	To Main Library*:		To entire OSUL system**:	
Brittleness	21%	420,000	vols.	840,000	vols.
Acidity	90%	1,800,000	vols.	3,600,000	vols.
Binding structure not functional	10%	200,000	vols.	400,000	vols.
Leaf attachment not intact	6%	120,000	vols.	240,000	vols.
Text not intact	6%	120,000	vols.	240,000	vols.
Environmental damage	13%	260,000	vols.	520,000	vols.
Mutilated/defaced	11.5%	230,000	vols.	460,000	vols.

* based on est. 2 million volumes in Main Library
** based on est. 4 million volumes in OSUL system

The results in Table 1 simply list the numbers of volumes that exhibit certain physical characteristics of deterioration. Of course, many volumes exhibit more than one of these physical characteristics simultaneously. The survey also found details on other characteristics of the collections, among them type of binding style, size of binding margins, and so on. Thirty-one percent of the sample had circulated outside of the Library in the prior ten years.

The results of the sample generally support the findings of other such condition surveys at the Library of Congress, Yale, Stanford, and others, although the OSUL Stack Tower collection does not seem to possess the degree of paper brittleness (21%) at which the Yale collections have been measured (37%). Specifically, it is shown again that date of publication can be a reliable predictor of a book's condition, regardless which collection holds the volume. For example, of the 109 volumes examined from the period 1870 to 1930, 69% have brittle paper, and 95% of this age group's paper is acidic, according to the sample. The figures for each decade of publication's level of brittleness and acidity are as follows:

Table 2: Paper brittleness and acidity by decade of publication

Yr. of publ.	sample size	brittle #	%	acidic #	%
1700–99	4	0	0%	0	0%
1800–49	4	1	25%	4	100%
1850–59	0	–	–	–	–
1860–69	2	0	0%	2	100%
1870–79	1	1	100%	1	100%
1880–89	6	5	83%	6	100%
1890–99	14	11	79%	14	100%
1900–09	23	16	76%	23	100%
1910–19	24	17	71%	22	92%
1920–29	41	25	61%	38	93%
1930–39	37	14	38%	36	97%
1940–49	42	12	29%	40	95%
1950–59	53	8	15%	53	100%
1960–69	108	9	8%	106	98%
1970–79	145	0	0%	125	86%
1980–85	64	0	0%	41	65%
Totals	568	120	21%	512	90%

Table 2 is not only a telling depiction of the amount of deterioration in older collections, it is also an accurate predictor of future brittleness of papers with high–acid content. As stated, paper from the post–1870 period has a useful shelf life of about 50–100 years, depending upon actual fiber content of the paper, and the storage and usage conditions. The relatively new books — those acquired since 1930 — will begin to show considerable decay by the end of this century if their acidity is not neutralized, or if they are not reformatted (transferred) to a stable medium, e.g., microform.

The age of the collections (monographs), as analyzed by the LCS database: A recent analysis (April 1986) of the LCS database indicates that there are 1,857,324 monographic titles in the database for the OSUL collection as a whole. Table 3 and 4 outline a breakdown by date of publication:

Table 3: Date of publication for the OSUL Monograph Collection

Date	Number of monograph titles*	% of total
pre–1850	34,370	1.9%
1850–59	7,677	.4%
1860–69	7,827	.4%
1870–79	10,104	.5%
1880–89	14,891	.8%
1890–99	21,703	1.2%
1900–09	36,539	2.0%
1910–19	46,458	2.5%
1920–29	76,720	4.1%
1930–39	104,931	5.6%
1940–49	139,160	7.5%
1950–59	195,389	10.5%
1960–69	441,656	23.8%
1970–79	497,743	26.8%
1980–86	222,156	12.0%
	1,857,324	100%

* includes cataloged microform monographs.

Table 4: Date of publication for the Main Library Stack Tower Monograph collection

Date	Number of monograph titles	% of total
pre-1850	17,338	1.9%
1850-59	5,160	.6%
1860-69	5,325	.6%
1870-79	7,356	.8%
1880-89	11,181	1.2%
1890-99	15,784	1.7%
1900-09	24,352	2.7%
1910-19	31,631	3.5%
1920-29	49,490	5.5%
1930-39	60,393	6.7%
1940-49	72,777	8.0%
1950-59	91,790	10.1%
1960-69	205,400	22.7%
1970-79	215,159	23.8%
1980-86	91,825	10.1%
	904,825	99.9%

As Tables 3 and 4 show, the Libraries hold a significant number of titles from the 1870-1929 period, the age of poorest paper. 139,794 titles from Main and 206,415 titles from the entire OSUL are from this most "at risk" portion. This does not include volumes of any serial titles.

Surveying the remaining OSUL collections

To undertake other condition-related investigations in the self-study, the Task Force on the Condition of the Collections contacted all location librarians and made site visits to each location to gather important general information about the physical condition of the collections.

Methodology: The Task Force conducted an inventory of the types and formats of materials in 44 library locations in order to assess the nature and extent of the physical problems that exist in the book/paper and non-book materials. Although the results are necessarily more subjective than those obtained in the random sample study conducted in the Main Library Stack Tower, the involvement of librarians in supplying information helped to identify specifically the major problems in each area. A questionnaire was sent to each of the location librarians in order to identify the existence, nature, and size of specific sub-groups and formats in each of the locations. Each library was visited by a member of the Task Force, who reviewed the questionnaire with the librarian and noted the nature of preservation problems for each of the sub-groups.

The survey estimated each library's holdings of the following types of book and non-book materials:

- general (non-rare) collections of monograph and serial volumes;
- rare or special materials with restricted access;

- atlases and maps
- theses and dissertations;
- newspapers in paper copy
- reference and reserve materials;
- vertical file materials, card files, offprints/reprints, test files;
- government documents;
- manuscript materials and scrapbooks;
- catalog collections;
- broadsides and posters;
- music scores and sheet music;
- photograph albums, slide transparencies, and a wide variety of early photographic materials (ambrotypes, tintypes, cartes de visites, glass lantern slides, etc.);
- comic books and cartoon art;
- fine prints and portraits;
- tracings of watermarks;
- motion pictures, cassette and reel-to-reel audio recordings, LP disk recordings, compact disk recordings, videotapes;
- microforms, in master and service copies;
- computer software; and
- models, realia.

Summary of findings: Of primary concern to the librarians and to the members of the Task Force were the following:

1. Treatments needed to protect, conserve and reformat the collections

   - commercial binding. Nearly every library exhibited the results of a failure to provide a protective binding for large numbers of volumes of long-term value that receive moderate to heavy usage. This has resulted either from the lack of binding funds or from the failure to send materials for commercial binding.

   - routine repairs. Routine repairs done in the past on volumes in the collection show a lack of durability and functionality. At this writing there is markedly insufficient repair service to meet current needs.

   - replacement funds. With limited funds available, book selectors generally give top priority to current acquisition. Ideally, replacement of worn and/or deteriorated materials should also be supported from these funds, but rarely is there judged to be enough money available for this.

   - embrittled texts. There is currently no established avenue for department librarians or bibliographers to take in replacing out-of-print brittle or damaged texts. Procedures for reformatting by preservation xerography and preservation microfilming are required in all of the collections.

   - other conservation treatments. Protective enclosures and encasements for materials are needed in nearly all libraries.

- restricted access materials. In addition to the five designated special collections (Communication & Graphic Arts, Hilandar, University Archives, Lawrence and Lee Theatre Research Institute, and Special Collections) there are 17 libraries that hold materials that have been judged already to have value as rare books or artifacts. These collections consist of 17th to 20th-century serials and monographs in varied conditions, numbering over 10,000 volumes. Most are not housed in climate-controlled facilities; several are housed in very poor temperature/relative humidity conditions. It is almost certainly the case that were systematic surveys of the collection made there would be many, many thousands more such volumes identified.

2. Environmental and housing problems

- space restrictions. Restrictions on space to house the collections are judged to be of primary importance in most of the libraries. Lack of adequate space to shelve the collection was noted by 27 of the 44 librarians; 4 of them felt that space was one of their major concerns, and 6 considered it a problem of crisis proportions. Both quantity and quality of shelving space have a very direct impact on the condition of the collections.

- dirt, particulates and cleaning. Many of the librarians considered the problems of coping with dust, dirt and other particulate matter to be of very high importance.

The Task Force noted numerous comments on other related points: stacks maintenance and support structures for library materials; temperature and relative humidity levels; security, theft and mutilation of collections; and, water leaks, experienced by nearly every library.

Task Force recommendations are outlined in Section IV of this report.

C. Task Force 3: Disaster prevention and preparedness

Through the ages — from the famous Alexandrian Library fire in ancient times to the devastating Florence Flood of 1966 to the very recent Los Angeles Public Library fires of 1986 — the ravages of fire, water, biological agents and human negligence have taken their heavy toll on the world's libraries, great and small. The disasters of flood and fire and other emergencies that threaten library collections can sometimes — but certainly not always — be anticipated or prevented, though every library must endeavor to do so. And, it is paramount that in those situations when such disastrous occurrences cannot be anticipated or prevented, that the library should have the ability to deal quickly with the problem to salvage library materials using the most effective means possible.

Charge and Methodology: In the preservation self-study the Task Force on Disaster Preparedness was charged to examine the potential for emergencies, disasters and crisis situations in the Libraries, recommend changes to reduce the occurrences of potential disasters, and draft a Disaster Plan as preparation for dealing with all such potential situations. In doing so, they were to limit their work to considerations of those situations in which water, fire, security issues, equipment failures and biological agents affect the collections of the Libraries, not the people who use and work in them.

Findings: In carrying out their work, Task Force members first interviewed staff of those libraries which had experienced emergency or disaster situations within the past ten to fifteen years. They found that in recent years there have been many such situations involving library materials throughout the entire OSUL system. There have been numerous floods, leaky pipes and roofs, mold outbreaks in the collections, insect infestations, and security problems.

Most of the emergency situations that were documented by the Task Force show that Ohio State has been quite lucky thus far, especially in that those staff members responding to emergencies have done so in a thoughtful and timely, even, we daresay, heroic manner. But, as buildings, pipes and HVAC systems get older, and as the continuing need for more space forces the Libraries to house materials in less-than-ideal conditions, the collections become increasingly vulnerable.

Among the worst situations documented by the Task Force were:

- a burst Main Library steam radiator in winter of 1985, in which 2400 volumes were damaged;

- mold outbreaks in the Main Library stacks at various times since 1982;

- flooding caused by inadequate drainage in the Education/ Psychology Library (recurring);

- frequent water leaks in the West Campus LRC;

- a burst radiator in Chemistry Library in 1973, in which several hundred volumes were destroyed or damaged;

- roof leaks in many library locations, among them the Social Work Library, the Veterinary Medicine Library, and in several Main Library locations;

- water leaks caused by failure to follow scheduled maintenance procedures for conditioning systems;

- many other water leaks that have affected nearly every library in the OSUL system; and,

- off-campus residential fires in which library materials have been affected.

Some of the problems which has resulted in damage to the collections have been resolved. Many have not. A number of factors have affected the successful resolution of these problems; among them have been the complexity of a given situation, the level of cooperation with Facilities Maintenance, the age and condition of a particular building, and the lack of funds to meet the needs.

The Task Force noted that the Libraries have been particularly fortunate in being spared from fires. However, the collections are very vulnerable to damage or destruction by fire, as the Libraries has sprinkler systems only in a few areas and there are very few smoke alarms. Should a fire break out, the collections are, to a large extent, virtually unprotected, especially if the worst were to occur during a time when a library was not staffed (nights, some weekend days, holidays).

The Task Force noted that some of the Libraries' staff have had considerable experience and training with the salvage and recovery of wet library materials, with some of this experience acquired through on-site training within the Libraries. For preparedness, a small quantity of disaster supplies (plastic milk crates, plastic sheeting, paper towelling, etc.) has been stored since 1985 in a Preservation Office unit.

The draft "Emergency Plan" and general recommendations: The Task Force made a careful study of the history of recent emergencies in the Libraries with due consideration of observations made by staff. Their analysis brought out many of the particulars of prevention and preparedness. The Task Force came to realize the critical importance of improved cooperative arrangements between Facilities Maintenance and the Libraries in both minimizing the chance that emergency situations might occur and in coping with them when they do occur. The key to good emergency and disaster response is active cooperation among Facilities Maintenance, Campus Police, Fire Safety and the Libraries.

"Prevention" and "preparedness" are the code words for the Task Force's work. The most effective emergency preventative is an alert and caring staff which monitors day-to-day operations to identify potential problems. A library window broken by a campus snowball fight cannot be predicted, but flooding due to poor air conditioning maintenance can. All Libraries staff and Facilities Maintenance staff must become aware of routine activities which, when taken cumulatively, can deter many emergency situations.

To be worthwhile, emergency preparedness must be an on-going activity covering all types of potential disasters. To provide for this, the Task Force created a draft "Emergency Manual for the OSU Libraries" — with the recommendations that it be discussed, tested and implemented system-wide. The Preservation Officer will coordinate this activity, assisted by a Disaster Team trained and available for action when needed.

Task Force recommendations are included in Section IV of this report.

D. Task Force 4: Organizational implications of preservation

Unlike most research libraries that are participants in the ARL/OMS Preservation Planning Program, the OSU Libraries had already made the commitment to establish a formal preservation program before it undertook this self-study. Since November 1984, the Libraries has had a Preservation Office headed by a trained preservation specialist. The organization of this Office, and other direct preservation activities in the Libraries are outlined above in section II.E., "Preservation efforts to date in the OSU Libraries."

All libraries carry out preservation functions even without a formal preservation operation. Specific and explicit preservation policies are still not common in most research libraries, but there are nevertheless preservation implications in many written and unwritten policies dealing with many aspects of a library system. Within the Libraries there are preservation implications in the work of nearly every unit — in selection, routine processing, circulation, stack maintenance, book repair, the mail system, binding policies, documentation, and so on.

The Charge: The Task Force on Organizational Implications of Preservation (Task Force 4) was given the charge to examine the Libraries' current organizational procedures and activities, to analyze the procedures and activities in light of pertinent preservation issues, and to report to the Preservation Study Team on its findings and recommendations.

Methodology: The Task Force began its work by collecting documentation of organization-related preservation procedures currently in use in the OSU library system. Among the documents the Task Force examined were the Library Policies and Procedures Manual (not in current use) and written procedures of Technical Services and the mail system. The Task Force created a series of flow charts to document the flow and handling of materials from their receipt by the Libraries through processing to public service units, to the shelf, to the patron and back to the shelf again. Flowcharts were developed for the mail system, Acquisitions, Cataloging, Circulation, Copy Cataloging, routing of materials to all library units, and Labeling. These areas were then visited by the Task Force members for observation of processing and handling procedures that were perceived to have an impact on the preservation of the materials.

Concurrently, the Task Force identified for study the following organizational, processing, handling and treatment issues:

- the use of book returns;
- temporary binding policies in lieu of commercial binding;
- the gathering and reshelving of materials;
- food and beverage policies;
- treatment and/or replacement of damaged and brittle materials and the replacement of books declared lost by patrons;
- post-processing marking of library materials;
- the use of flags and streamers by the Libraries' faculty and staff for the identification of needed treatments;
- first time binding policies for serials and paperback materials;
- procedures for "tattletaping" library materials (i.e., sensitizing items to the electronic security system);
- the use of paper clips in processing;
- the use of bookplates;

- interlibrary loan policies; and
- several other related matters.

The Task Force developed a series of survey instruments to record observations and interviews. Findings were then analyzed and recommendations made to the Study Team.

Findings of the Task Force:

Documentation: Systematic documentation related to preservation is lacking.

Workflow: The Task Force made the following observations on the general flow and handling of materials throughout the system:

- special collections materials. There are no written guidelines or "rules and regulations" for users of Special Collections or the Hilandar Research Library. The University Archives and the Library for Communication and Graphic Arts provide their readers with such documents.
- shelving practices and shelving decorum. Book supports are needed; many large items are shelved on their fore-edges; materials on shelves are not well maintained.
- obstructions in the transport of materials. Protruding fire door sills in hallways have caused book trucks to tip over during transport.
- book plates. Of the more than thirty types of bookplates affixed to materials acquired by the Libraries, none was found to be alkaline ("acid-free").
- paper clips. Order slips and book plates are attached with paper clips to incoming monographs in Acquisitions. Paper clips can damage the books when they are removed, and additional damage can occur if they are left in the books.

Book returns: The 17 after-hours book returns ("book drops") in the system are emptied on varying schedules. Some librarians do not favor removal of the after-hours book returns because of concern for the easy return of high-demand materials by patrons. Nevertheless, damage, including damp and torn pages, damaged bindings, and the miscellaneous results of vandalism, is routinely reported as a result of the use of book returns. Four of the most heavily used after-hours book returns — located at the very convenient 15th and High Street location — were eliminated by decision of the Libraries Administration in January 1986. No adverse patron reaction was reported following the action.

Temporary binding: Many libraries have made use of the Brodart 811 temporary "post-binding" option in lieu of commercial binding in the past when:

- a serial title is received in microform (the binding replacement policy is to not bind these materials when recieved in microform);
- commercial binding funds have been insufficient;
- incomplete titles are to be kept together until fill-ins are obtained; and
- other miscellaneous uses are identified for this method.

This type of binding has been utilized to a large extent since the early 1970's as an inhouse operation to supplant or supplement commercial "Class A" binding. It has a low unit cost (approximately $1), but is not meant to be used as a permanent binding. At Ohio State, the 811 binding system has for years used plastic rivets, but without stiff protective covers. Put simply, post-binding is damaging to materials bound with this method, which is not designed as a replacement for commercial binding materials of permanent value.

In some libraries the issue of post-binding is of the highest importance because it has been used to such a large extent. Post-binding is an important issue to librarians because of the effect post-bound volumes have upon the decorum of their collections. Post-bound volumes (especially those without accompanying stiff covers) have been found nearly impossible to maintain in proper order on library shelves. The resultant sloppiness negatively affects the general ambiance of the library (with unknown effects on user attitudes), and the post-bound materials are not in a usable format for readers.

Commercial binding: Providing a volume with a sound, sturdy, hardcover binding is often the first and most effective preservation treatment that an item will receive. It has unfortunately not been possible for fiscal and organizational reasons for the Libraries to bind commercially all soft cover materials that should be so treated.

Binding monographs: Currently, nearly all new Main Library paperbound monographs are bound before first shelving. Paperbound material already held in the collection is sent by Circulation to Collection Maintenance for a binding decision when the material returns from loan. Binding practices in the reading rooms and department libraries vary. The desirable criteria to be followed in making binding decisions seem to be the amount and type of use, condition when received, type of material, purpose of material, and its demand. Factors interfering with the criteria are inadequate binding quotas, lengthy turn-around time, and limited staff time to process materials for binding.

Binding non-periodical serials (Numbered series classed together, catalog-as-monograph series, annuals, yearbooks, etc.): The Libraries receive an estimated 7,000 unbound non-periodical pieces a year, of which approximately 2,000 go to department libraries and 5,000 go to Main Library Stacks.

All paperbound non-periodical serials are sent to all locations unbound. Serials with glossy covers and "substantial" volumes are sent to labeling before being sent to the locations; other pieces call numbers are marked on other pieces and sent directly to libraries. Catalog-as-monograph series are considered to be monographs in the processing flow and are handled as such.

Review criteria for binding differ among libraries. For example, the Classics and Latin American reading rooms do not review serials for binding decisions before shelving, but do if they are transferring pieces to Main Library stacks; Journalism reviews serials before shelving; Music does not reshelve serials until they are bound. According to the librarians surveyed, additional criteria and factors that influence decisions include cataloging treatment (series classed together vs. series classed separately, etc.), size, past treatment, insufficient resources, and retention.

Desirable criteria to be followed in making binding decisions include continuation status, retention, and cataloging and indexing treatment. Survey respondents suggested that decisions about binding could be made by the selector at the point of order or upon receipt at the locations. Processing staff could also make some of the decisions, and all of the respondents would like to see materials routed directly from Technical Services units to Collection Maintenance for binding treatments based on pre-established decisions or general guidelines.

Binding serials: After some years of severe budget constraints, binding for most current volumes of library serial subscriptions seems to be adequate. This situation has been helped by the policy of purchasing microform replacement subscriptions in lieu of binding for some 800 serial titles. The management of binding records and binding schedules has been improved recently with an automated system in Bindery Preparation; also, an automated serial check-in system is expected to be acquired for the Libraries. Both are expected to enhance the management of to-be-bound serials in all locations, including Main.

Food and drink policies: The presence of food and beverages in libraries has direct preservation implications. The Task Force surveyed all Big Ten library systems to ascertain their policies on the consumption of food and beverages in their public and non-public areas. Among these libraries, all inform their patrons that food and drink are not allowed in the library proper, and that staff may not consume such comestibles in areas visible to the public. The institutions vary in their policies in non-public areas, with some libraries opting for strict non-consumption policies and others having no policies at all.

Similarly, policies in the OSU Libraries vary widely from department to department, depending upon the physical arrangement of the department. The general practice throughout the system is that food and drink may be present and consumed in the work areas if the work area is out of the public's view. The Task Force recognized the importance of removing food and drink as hazards to the collections, and the issue was the most sensitive, in terms of staff attitudes, discussed by the Task Force.

Treatment and replacement of damaged and brittle materials: Department librarians and bibliographers have limited options for remedial or replacement actions for damaged and brittle materials. Damaged materials (non-brittle and repairable) are routinely sent to Bindery Preparation for rebinding or recasing through the commercial binder. Since late 1984 when routine mending was cut back, there has been very little quick repair and mending. This has improved somewhat as the Collection Maintenance Division has expanded its ability to handle more treatments, but it has yet to benefit all libraries. For actions to be taken for brittle or irrepairable items, libraries generally acquire in-print hard copy monograph replacements when the item and the funds are available, using the current acquisitions budget. For serials, microform replacements are obtained when available and when funds are available for these expensive purchases. Monographs are generally not replaced in microformat, partly because bibliographic information about microform masters is not easy to find, and replacement search routines do not include monographs available in microformat. The Libraries lack a systematic approach, involving both collection development and preservation guidelines, for informed preservation decision-making in the collections.

Theft prevention systems: The book-theft control systems in the Libraries represent a considerable ongoing expense, and are seen as a necessary operation to protect the collections. There are fourteen 3M control systems in place in the Libraries, including the Main Library's system that covers all units in the building. The Business Library employs a Checkpoint system, which the Task Force saw as an unfortunate, albeit well-established deviation from the "standard" 3M system. Geology, Home Economics, Law, Mathematics, Materials Engineering, Perkins, Physics, Social Work, Stone, Topaz, and Pharmacy are not equipped with theft detection systems.

Theft detection devices (3M's "tattletapes" or Checkpoint's "Sentrons") are inserted during various phases in the processing of a typical volume — at the bindery, in Collection Maintenance, at Main Library Circulation, or at the library where the item will be shelved. Training for insertion of detection devices is currently done on a decentralized basis. While most "tagging" is done properly, inserted devices are often quite visible and are relatively easy to remove (i.e., improperly inserted tattletapes protrude visibly at the head or tail of the spine; Sentrons are adhered to leaves in a book or magazine). Other research library systems tattletape or tag their book collections very shortly after the materials are received in the acquisition department. Because of the number and variety of locations/security systems, this procedure has not been adopted at the OSUL.

Interlibrary Loan: The Interlibrary Loan unit has no formal written instructions regarding condition-related lending or rejection-from-loan, but staff do receive oral instructions The mail room dispatches material in padded "Jiffy" bags, unless instructed otherwise, or if the dispatcher judges the item to be too heavy or bulky to be trusted to a Jiffy bag. Material not sent in Jiffy bags is wrapped in two layers of brown paper and encased in corrugated cardboard, which is fixed with metal staples.

Post-processing marking of library materials: The amount of marking ranges from special collections where no marking is done, to libraries where nine or ten different tapes, labels, or stickers are used. Among the most common markings are stamps, which include ownership stamps and circulation stamps. Almost every reporting library uses some form of label and tape that vary in their effectiveness. Much of such post processing marking of materials was seen as destructive or defacing to the collection.

Task Force recommendations are included in Section IV of this report.

E. Task Force 5: Preservation education and awareness

The Libraries' collections are selected, acquired, processed and maintained for the use of students, faculty and other researchers. But that process of handling and usage, taken with the fragile nature of the materials themselves and the type of physical environments in which they are stored, is a central factor in the longterm survival of individual items and the collections as a whole.

Many perceive that we live in a "throw-away" culture, one in which we routinely "use it up and trash it," often well before "it" needs to be "used up." Unfortunately, this attitude is common to many users of libraries, especially those who have not been made aware of the value or irreplaceability of research library materials. Moreover, to many, books often represent tasks to be dispatched as expeditiously as possible.

Because of these social trends and because the effects of handling and using collections are cumulative or compounding, it is important that efforts be made to inform users and employees about the fragility of the collections and appropriate methods of using and handling them. Indeed, as a first line of defense, the importance of appropriate, careful handling and usage of the collections by the University's extraordinarily large user population can hardly be overestimated. Given that over 20% of the book collections are embrittled, that already tens of thousands of volumes require repair or other treatments, and that over 11% of the collections have been mutilated or defaced in some degree, efforts to reduce preventable damage caused by thoughtlessness or improper usage must be seen as cost-effective "preventive medicine." There is no substitute for staff and patron awareness and vigilance, and there is no escape from the idea that preservation is the concern of everyone.

Task Force charge and methodology: The Task Force on Preservation Education and Awareness (Task Force 5) was charged to examine current education/awareness activities in the Libraries, to analyze them in light of preservation issues and to report its findings and recommendations to the Preservation Study Team. Using a questionnaire, Task Force members surveyed department libraries and units in Main Library to determine what current relevant activities exist and to identify perceived needs. The Task Force analyzed the survey results to identify components which it judged would have a strong impact on the development of improved awareness of preservation of the collections. Also, the Task Force viewed a number of existing audio-visual materials to determine what means are currently available for training and education. Numerous site visits were made to campus libraries and interviews conducted with library faculty and staff. The Task Force's inquiries elicited comments related to appropriate mending/repair, identification of damaged materials, shelving/reshelving, photocopying, food and beverages in the library, environmental-related issues (temperature), signage and posters, types/levels of training and instruction, protective plastic book bags for rainy days, and so on.

Task Force findings: Because the Preservation Office has been in existence for so short a time, and much of that taken up with this self-study, there exists as yet no concerted, centralized effort to communicate with library employees and users to inform them about preservation issues. The Task Force recognizes that such an effort is essential for a comprehensive preservation program for the Libraries. Since the establishment of a Preservation Office and the OSU Libraries' participation in the ARL/OMS Preservation Planning Program, awareness of the need for this has increased considerably. Yet, only a modest beginning has thus far been made, as outlined by this summary of the Task Force's findings.

The Office of Library User Education has incorporated preservation awareness information to some extent into its programs, most notably in the University

College's UVC Handbook and in a revised newspaper-format introduction to the Libraries to be issued in Fall 1986, with text supplied by the Preservation Officer. The Office of Library User Education has also been responsible for assisting in the development and dissemination of signage relating to the Libraries' food and drink policy. The Task Force noted the high potential for preservation awareness through cooperative efforts between the User Education and Preservation Offices.

At the present time, general instruction of staff and student assistants for preservation issues falls into two main categories: (a) training sessions or informal individual instruction (staff meetings discussing the care and handling of materials, the viewing of slide/tape presentations, or written procedures for handling specialized collections) and (b) on-the-job experience and training. Not all campus libraries, however, provide such preservation-related training; many survey respondents expressed a desire for written or A/V materials to include in their employee orientations and training sessions. One of the most organized efforts for instruction is in the Main Library Circulation Department's Bookstack unit. Proper book handling and shelving have been taught as part of training sessions, incorporating hands-on demonstrations as well as slide presentations. Disaster preparedness procedures are also discussed so that staff may act swiftly in emergency situations.

Except for training for staff in bindery preparation, no Preservation Office-sponsored seminars or programs have yet been produced. The Task Force noted the critical need for such "outreach" programs, aimed at faculty, library staff and student assistants.

Attempts to reach OSUL patrons directly have been limited to several forms of relatively subtle approaches. Signage can be one very effective direct or subtle communication medium. Currently-used preservation-related graphics include an attractive, cleverly-composed "Please don't eat ... in the Library" broadside; a series of preservation awareness signs obtained from the Illinois Cooperative Conservation Program and displayed in several locations; a "Note to the Reader" affixed to protective enclosures for brittle or damaged book volumes; and, a bookmark requesting no food or drink in the library. Beyond signage, perhaps the most notable effort thus far has been the exhibit in the Main Library Skylight Exhibition area (also displayed December-January at Bricker Hall) entitled "Preserving the OSU Library Collections: A Challenge for the 1980's and Beyond," on view throughout the Fall Quarter of 1985. The goal of all these efforts is to heighten users' awareness of the effects that their actions have upon permanent research collections and what they can do to avoid damage to and prolong the life of the collections.

The Task Force noted efforts made by the Friends of the Libraries to promote preservation efforts. This group has raised the awareness of its Collector's Committee, and has encouraged donations to the Libraries' preservation efforts through its Adopt-A-Book program, publicized through its Friendsline newsletter. The Friends' recent fund-raising Phone-a-Thon included mention of preservation as a clear financial need of the Libraries.

The University community has been kept informed of nascent preservation efforts through articles in OSU onCampus, the Lantern, and through updates in the Libraries' new publication Tracings.

The Task Force noted that signage in many library locations leaves much to be desired. Often, library locations use too many signs and the signs are poorly executed, creating an atmosphere in which all signs may simply be ignored. The Task Force also made numerous comments on the general ambiance of many libraries. Routine cleaning, painting and repair were noted as sorely needed in many. Behavior in libraries was noted as often reflecting the ambiance of those physical locations: where libraries are clean and well-ordered, patrons tend to maintain the areas and respect the collections; where libraries are poorly maintained, behavior in the library and treatment of the collections tends to degenerate.

Although the report of this Task Force deals with a seemingly minor aspect of preservation, education for preservation awareness treats a number of sensitive and/or critically important areas. Most important among them is that preservation awareness is inextricably linked to general attitudes of library faculty, staff, student employees and patrons. Fostering a sense of pride in the Libraries and its mission has been identified as a most important task to be accomplished to lead to better preservation awareness and thereby to improvement in the care given to books and other materials in the collections. Perhaps the most significant challenge which the Task Force encountered is the lack of any precedent for centralized training/orientation in the system. However, an effort to organize a training program is in the early stages of development, with which the Preservation Office will become involved. Nevertheless, throughout the study the Task Force observed a high level of interest in preservation. There is an enthusiasm among the library faculty and staff which will benefit these efforts.

Task Force recommendations are included in Section IV of this report.

F. Task Force 6: Resources, collection development and preservation

The Ohio State University Libraries' collections provide remarkable resources of unusual breadth and depth to the scholarly community. The physical deterioration of the collections is clearly detrimental to the curricular and research interests of the University. In the Ohio State University Libraries, where the quantities of deteriorated materials are currently much greater than the Libraries' capacity to treat or replace them, the processes of selection for treatment becomes critical. The selection process, and indeed the entire preservation effort in research libraries, is increasingly driven by collection management and development policies. For this reason, a task force of the preservation self-study investigated the larger issues of resources and collection management as they relate to the preservation of the OSU Library collections.

The charge: The primary charge to the Task Force on Resources and Collection Development was to draft a preservation policy statement for the OSU Libraries. This policy proposal (of which an outline is included as Appendix 2) was to cover the following areas:

- priorities for preservation and conservation treatments;

- definition of "rare" materials, as well as those areas of the collection that have specific artifactual value;

- determination of guidelines for the transfer of materials from open stacks to protected environments;
- examination of selection criteria which affect the longevity of the collections (i.e., paperback vs. hardback, film type, tape format, first-time binding of paperback materials, etc.)
- preservation management applications of the Library Control System (LCS);
- participation by the Libraries in cooperative preservation programs; and
- investigation of the advisability of inhouse or service agency microfilming capability.

The eight-member Collections Advisory Council, a standing Library committee, served as the Task Force. The Task Force recognized the difficulty of instituting a preservation policy in the absence of a written collection management program and policy, but proceeded to evaluate the specific charges as individual areas of concern. They agreed that the establishment of a collection management policy would be the first and most important result of their work.

Methodology: The Task Force began its work by reading appropriate background information, including written preservation policies from other large research libraries. The investigations into the separate issues were divided among the eight Task Force members. Written reports were presented to the full Task Force for discussion. Upon review of the interim reports, the Study Team agreed that a final Preservation Policy could not be completed as part of the Task Force report, but required an extended period of preparation, consultation and review within the Libraries. Therefore, a final written set of recommendations, with the draft Preservation Policy Statement and supporting documentation, was submitted to the Study Team.

Task Force findings:

Definition of "rare" materials in the collections, and guidelines for transfer: The Task Force reviewed policies on rare materials from a number of other research libraries and discussed the issues with OSUL selectors and curators. The Task Force also investigated the existing Association of College and Research Libraries, Rare Book and Manuscript Section draft guidelines for the transfer of library materials. These guidelines were for both rare materials and those materials that are not rare but which, for other reasons (e.g., artifactual value, price, high theft risk, etc.) should be housed in a controlled, protected environment. The Task Force's considerable documentation provides the basis for further policy discussion in these areas. Draft guidelines, and the subsequent recommendations for the transfer of materials are contingent upon appropriate space for the materials and a formal written transfer policy.

Priorities for Treatment of Materials: When the data from Task Force 2's condition survey are considered, indicating that 21% of the general collections are embrittled and other evidence of physical deterioration exists, it becomes clear that preservation action must be taken within the very near future to retain the Libraries' present collections and to assure that new acquisitions are protected. To provide a structured approach for the review of the collections, priorities for treatment must be established and each item must be evaluated in the context of such priorities. Until a comprehensive collection management policy for the Libraries can be developed, only provisional priorities can be established.

The Task Force outlined a draft statement of priorities for preservation that addressed ways to manage the older collections, new acquisitions, monographs and continuations. The draft also makes special mention of Libraries' collections of notable strength, suggests development of individual preservation priorities by selectors and stresses the need for selectors' initial review of newly acquired materials.

The primary responsibility for the identification of items needing treatment and the decision to take action on a specific item lies with subject specialists, the selectors/bibliographers. Based upon final established collection management policies, treatment methodology is to be decided by the selectors in consultation with the Preservation Officer.

Preservation microfilming: Since the 1930's preservation microfilming has been an accepted, cost-effective method of preserving the informational content of deteriorating materials. Over the years, research libraries and commercial microform publishers have reformatted many thousands of volumes of unstable paper to stable silver halide microfilm, at the same time making possible the wider distribution of the texts, since additional copies of these microfilm masters are easily and inexpensively reproduced and distributed. It is expected that preservation microfilming technology will continue as a viable, cost-effective preservation alternative even as the promising capabilities of the newer digital technologies emerge.

For the OSU Libraries, preservation microfilming must be considered an important preservation option for those embrittled items in the collection that are valuable primarily for their informational content rather than their decorative or illustrative qualities. Works with decorative, illustrative, or artifactual qualities that dictate the retention and preservation of the original may in fact be candidates for preservation microfilming when some general use could be diverted to the microform copy thereby extending the life of the endangered original.

In assessing the appropriate options that would meet the needs for preservation microfilming in the Libraries, the Task Force considered the advantages and disadvantages of establishing an in-house filming operation as opposed to contracting with outside vendors for services. In its investigation the Task Force contacted research libraries with established in-house microfilming operations, several microform service bureaus, and the University Archives, a part of the Libraries which operates a microfilming operation for single sheet University documents.

The Task Force noted that an ideal situation would dictate a fully-equipped and fully-staffed inhouse preservation microfilming operation. Such an ideal facility would be able to handle all types of preservation reprography for the collections. In taking note of considerable start-up and operating costs, however, the Task Force also identified the availability of archival quality microfilming agencies, specifically those operated by some research libraries whose services are available to the Libraries.

Automated bibliographic support for preservation activities through the Library Control System (LCS): The availability of online records for each title and copy held by the Libraries has significant possibilities for collection management. The Task Force analyzed preservation information needs and recommended the development of a Technical Services File, analogous to the existing Circulation File and Serials Holdings File structures. The Task Force outlined a specific set of data elements that could comprise this LCS enhancement and which would display, in identifiable segments, only on staff terminals. It noted that such elements do not interfere with the plans of the Library of Congress MARC Standards Office to incorporate preservation data elements into machine readable cataloging records. The development automated bibliographic support would allow the tracking of preservation activities, the production of much needed preservation management information, and could facilitate cooperative preservation efforts with other institutions.

Cooperative inter-institutional preservation efforts: No single institution, not even the Library of Congress, can hope to preserve its entire collections on an independent, unilateral basis. Preservation of our intellectual resources can only be accomplished through the cooperative efforts of libraries, archives, and historical societies working together as part of a nationwide effort for preserving significant collections. There currently exist a number of model cooperative preservation programs for Ohio State to emulate or in which participation may be possible. These cooperative programs — involving the Research Libraries Group, the American Theological Library Association, the American Philological Association, and others — are using preservation microfilming technology to preserve and disseminate participants' collections of closely defined areas of publishing (e.g., theological works published in the U.S. from 1860 to 1920). The Task Force noted that such efforts can and should involve the Ohio State collections.

The Task Force documented the historical background of cooperative programs and noted the requirements and impediments for successful participation in different types of cooperative preservation efforts for the OSUL. It listed possible future projects that involve local, statewide, regional and national cooperation.

The Task Force noted the enormous benefit that would be provided by a facility to "deacidify," en masse, significant portions of the OSUL collections. Such "mass deacidification" technology currently exists, with the capability of neutralizing (for approximately $5.00 per volume) the destructive acids contained in modern book papers. Such a process extends the life of books by literally hundreds of years. The Task Force noted the current activities of the Ohio Conservation Committee (OCC) and its Subcommittee on Mass Deacidification, and the Committee on Institutional Cooperation (CIC), who are both studying the costs and feasibility of mass deacidification facilities for their constituencies.

Finally, the Task Force cited the need for a regional conservation treatment center, similar to well-established Northeast Document Conservation Center (NEDCC).

Task Force recommendations are included in Section IV of this report.

* * * * * *

The full reports of the six task forces contain valuable information in much greater detail than can be included in this Final Report. Those task force reports supplement this Final Report and will be used for further reference and guidance as the recommendations of this Report are implemented or revised.

IV. Recommendations for Preserving the OSU Libraries' Collections

The recommendations that form the concluding segments of this Final Report range from simple but effective solutions requiring little commitment of resources to the implementation of new programs or building improvements requiring substantial funding, capital and ongoing. The commonality of these recommendations is that all will enhance the longevity of the Ohio State University Libraries' collections. It is obvious that not all the recommendations can be carried out at once. Instead, they are intended to serve as goals for the Libraries' preservation program for the remainder of the 1980's and into the 1990's. An Implementation Schedule (Section V) has been developed by the Study Team to serve as a guideline for implementing the program in the Libraries.

The Study Team, while recognizing that all the recommendations are important, wishes to call particular attention to five areas.

- A comprehensive written Collection Management and Development Policy to guide preservation policy in the Libraries is most urgently needed. In the extensive collections of any research library, it is very difficult, if not impossible, to make decisions about preservation policy in the absence of clearly defined collection policies.

- Given that a significant portion of the collections is deteriorated, an extensive, active preservation replacement program is essential. This program will require the Libraries' personnel physically to identify, handle, and make preservation decisions on tens of thousands of individual brittle or otherwise deteriorated volumes. Preservation replacement must include the purchase of the same texts in reprint editions, or, more often the copying of these texts by the use of microphotography or xerography. This effort will require much time from already busy people, significant moneys, and (as soon as possible) the beginnings of the above-mentioned collection management/development policy documentation.

- An intensive preservation education effort is clearly needed, aimed at all who handle or use the Libraries' collections. This effort must stress that preservation is everyone's concern. Most importantly, this state of mind must permeate the thinking of all library personnel.

- The physical environments that house the collections must be improved. Temperature, relative humidity, light, dust and dirt can all have a quiet, but definite and negative impact upon the longevity of the collections. Similarly, poor building maintenance can result in what would otherwise be preventable disasters and can encourage inappropriate behavior by library users.

- Conservation and restoration treatments are needed for rare and unique items in special collections as well as many in the general research collections. A significant beginning has been made in repairing and protecting items in the general collections, but the Libraries has not yet addressed the treatment of its rarities and treasures.

* * * * *

The recommendations that follow are grouped into four broad categories, and are further divided for specificity. The recommendations are not to be considered as a priority ranking but instead reflect the ARL/OMS methodology and format. Each recommendation cites a suggested library administrator or group to whom that recommendation is to be referred, a suggested implementation timetable, and, where available, estimated costs. An Implementation Schedule, Section V, follows the recommendations.

A. Recommendations relating to improvements of the physical environment

1. General

a. Develop cooperative arrangements between the Libraries and Facilities Maintenance regarding emergency preparedness and performance of routine maintenance. It is recommended that the Director of Libraries initiate a dialog to seek mutually acceptable solutions to several long-standing problems.
Refer to: Director of Libraries and Preservation Officer
Cost: staff time
Schedule: 1986/87

b. Provide all building coordinators in all buildings in which campus libraries are housed with appropriate information about efforts to preserve the Libraries' collections, and how building conditions relate to those efforts.
Refer to: Preservation Officer, Main Library Building Coordinator
Cost: staff time (ca. 30 hours)
Schedule: 1987/88

c. Secure funding to create a position for a certified air quality technician for Main Library. This person would provide scheduled routine maintenance for Main Library HVAC equipment, and may also inspect, maintain and monitor HVAC equipment through the Libraries.
Refer to: Director of Libraries
Cost: Air Quality Technician 2 position; ca. $21,000 per year
Schedule: 1987/89

2. Air Quality

a. Secure exemptions from energy conservation guidelines for all libraries to avoid damaging effects of "cycling" of HVAC systems. Develop the mechanism for effective implementation of such exemptions.
Refer to: Director of Libraries for recommendations to Office of Physical Facilities, Energy Management
Cost: generally increased energy costs
Schedule: 1987/88–

b. Implement adjustments to all existing libraries HVAC systems to adhere as closely as possible to the temperature/relative humidity levels of 65° F ± 5° F; 50% r.h. ± 5%
Refer to: Director of Libraries for recommendation to Office of Physical Facilities, Energy Management
Cost: generally increased energy costs
Schedule: as soon as possible

c. Install year-round environmental controls in all campus libraries that currently do not have environmental controls:
   - the Business Library in Page Hall
   - the Geology Library in Orton Hall

   Refer to: Director of Libraries for recommendations to University Administration
   Cost: to be determined
   Schedule: by 1991/92

d. Monitor temperature and relative humidity of targeted areas in the Libraries on an ongoing basis. Purchase and utilize thermo-hygrometers and/or hygrothermographs. Report conditions on a regular basis to building coordinators, Physical Facilities and Preservation Officer.
   Refer to: Preservation Officer
   Cost: additional equipment, ca. $3500 for 10 hygrothermographs
   Schedule: 1986/88

e. Utilize high-efficiency filters where possible (at least 90% efficiency on the "ASHRAE Dust Spot Test"), to be changed at least 2 times per year.
   Refer to: Director of Libraries and Preservation Officer for Office of Physical Facilities and Director Facilities Maintenance
   Cost: $4,000 annually
   Schedule: as soon as possible (now in place in Main Library Stack Tower)

f. In order to prevent patrons from placing books over diffusers to restrict air flow, install air diverters in areas of Main Library where patron seating is in direct path of diffuser.
   Refer to: Main Library Building Coordinator
   Cost: $400-500
   Schedule: Immediately

g. Relocate all books currently shelved within twelve inches of radiators to eliminate the damage caused to the books by intense heat.
   Refer to: Head of Circulation, Bookstacks Supervisor, appropriate librarians
   Cost: staff time, additional shelving space (to be determined)
   Schedule: 1986/88

h. Remove incunabula and other Special Collections treasures from the existing vault to the climate-controlled, secure area of Special Collections stacks or to a secure site outside the Library, pending construction of an appropriate vault.
   Refer to: Curator, Special Collections; Preservation Officer
   Cost: staff time: 20 hours; rental of outside vault (if needed).
   Schedule: Immediately

3. Light

a. Install ultraviolet-filtering storm windows in all book storage areas for improved security, building insulation and light filtering.

Refer to: Executive Committee, Main Library Building Coordinator, Preservation Officer
Cost: to be determined
Schedule: by 1990

b. Utilize existing shades or blinds in areas where library materials receive direct sunlight.
Refer to: Preservation Officer, Bookstacks Supervisor, appropriate librarians
Cost: minimal: added staff routine
Schedule: 1986/88

c. Provide ultraviolet filtering for all fluorescent fixtures in special collections and exhibit areas.
Refer to: Preservation Officer, Main Library Building Coordinator, special collections curators
Cost: $1,000 est.
Schedule: 1986/88

d. Utilize lamps with low levels of ultraviolet radiation in book storage areas. "Cool white" lamps should not be used in areas where books are stored. Incandescent lamps are preferred, as are fluorescent lamps manufactured under low-uv specifications.
Refer to: Executive Committee, Office of Physical Facilities
Cost: minimal
Schedule: as soon as possible

e. Instruct staff to turn off lamps in book storage areas when the areas are not in use. Provide filters for fluorescent lamps that must be kept "on" for security reasons. Install additional light switches to accommodate "lights off" policy.
Refer to: Executive Committee, Preservation Officer
Cost: "lights off" policy: no cost; filtering: ca. $300; installation of additional switches: $4,000+.
Schedule: 1986/88

4. Emergencies and disasters that threaten library materials

a. General

i. Make final and implement system-wide the draft "Emergency Plan for the OSU Libraries"
Refer to: Preservation Officer
Cost: staff time: 120 hours, including other library staff time involved; supplies/printing: $200.
Schedule: 1986/1987

ii. Equip each campus library with emergency supply kits according to the Emergency Plan.
Refer to: Preservation Officer
Cost: supplies: $1,000
Schedule: with implementation of Emergency Plan

iii. Investigate the possibility of campus police making periodic

investigative building walk-throughs to spot emergency situations during any period when libraries are closed for more than 24 hours.
Refer to: Director of Libraries, University Police Chief
Cost: staff time (University Police)
Schedule: 1986/87

b. Water-related emergencies

i. Repair immediately all known leaks. (MAI, BOS, WCL/STX, and other locations)
Refer to: Office of Physical Facilities
Cost: to be determined
Schedule: Immediately

ii. Inspect all roofs at regular intervals to find and correct problems before damage can occur.
Refer to: Office of Physical Facilities
Cost: staff time (Physical Facilities)
Schedule: Immediately

iii. Where possible, eliminate water sources (radiators, toilets, sinks, water fountains) from book storage facilities. Although this may be a daunting recommendation for most existing book storage areas, it should be mandated for any renovated or new facilities.
Refer to: University Architect's Office
Cost: to be determined
Schedule: Immediately

iv. Purchase wet/dry vacuum cleaners and/or sump pumps; store in key locations.
Refer to: Preservation Officer, Main Library Building Coordinator
Cost: $200
Schedule: Immediately; wet/dry vacuum units have been purchased

v. Secure a contract with American Freeze Dry (Audubon, NJ) or other freeze-dry contractor. At least 1% of general collections (40,000 volumes) and all special collections, should be covered. Arrange refrigerated transportation in advance for materials to be so treated in the salvage operation.
Refer to: Preservation Officer
Cost: $500+ per year, depending upon contract coverage
Schedule: 1986/87

vi. Stored materials in basement and ground floor areas should be stored at least 3 to 6 inches above the floor level.
Refer to: appropriate Assistant Directors
Cost: minimal
Schedule: Immediately (already completed in Main Library)

vii. Secure funding to purchase a Wei T'o Book Dryer for salvage operations.
Refer to: Preservation Officer, Executive Committee

Cost: $17,500
Schedule: by 1988

viii. Investigate the need for remote water sensors in areas of high water damage risk.
Refer to: Preservation Officer
Cost: staff time: 10 hours; costs to be determined
Schedule: 1986–88

c. Fire prevention

i. Identify all areas that lack smoke alarms. Obtain and install smoke detection devices for all locations that are not presently protected by such devices. Such devices should be linked to a central monitor(s) on campus.
Refer to: Executive Committee, Department of Fire Safety
Cost: staff time for investigating all locations
Schedule: 1987/90

ii. Restrict smoking to designated smoking areas. Remove all wall ashtrays and post permanent signage. Consult with Fire Safety for procedural and policy details.
Refer to: Department of Fire Safety, Preservation Officer, Executive Committee
Cost: signage: ca. $500; staff time: ca. 80 hours
Schedule: Immediately

iii. Secure stacks fire doors in the Main Library for fire safety purposes. Investigate all libraries for fire door safety and security.
Refer to: Executive Committee
Cost: $15,000
Schedule: 1986/88

iv. Seal cracks and openings between Main Library bookstacks floors and stairwells as a precaution against spread of fire. Currently, a fire cannot be contained on a single level of the Main Library stacks because of the chimney effect produced by those cracks and openings.
Refer to: Executive Committee, Office of Physical Facilities
Cost: to be determined
Schedule: 1986/88

d. Biological agents (fungi, vermin, etc.)

i. Remove the ethylene oxide Vacudyne fumigation chamber from the Archives for use on general collections materials in the Collection Maintenance Division. Retrofit this unit for carbon dioxide and/or thymol fumigation.
Refer to: Preservation Officer, University Archivist
Cost: moving costs; retrofit: ca. $2,000
Schedule: begin Winter 1987

ii. Investigate adequacy of pest control for all collections.
Refer to: Preservation Officer

Cost: staff time
Schedule: 1986/88

5. Space for the collections and for patrons

a. Construct an appropriate centralized storage facility for the collections. Space restrictions for book and non-book collections in current libraries spaces are paramount concerns for almost all campus libraries.
Refer to: Director of Libraries; University Administration
Cost: several million dollars, depending upon capacity
Schedule: fy 1987/89

b. Provide additional study facilities outside of campus libraries because over-crowding presents hazards to the collections and limits access to materials by other patrons who have a real need to use them.
Refer to: Executive Committee, University Administration
Cost: to be determined
Schedule: 1987/89

6. Housekeeping

a. Institute a bookstacks cleaning program in all libraries.
Provide equipment and supplies (portable vacuum cleaners, treated dust cloths, etc.) so that Libraries personnel can perform regular collections cleaning duties.
Refer to: Assistant Directors, Preservation Officer
Cost: equipment: $1,000; supplies: $250/year; staff: 2,000 student assistant hours/year.
Schedule: 1986/88

b. Increase custodial staff who are responsible for maintaining Library facilities.
Refer to: Director of Libraries, Office of Physical Facilities
Cost: to be determined
Schedule: as soon as possible

B. Recommendations relating to the management and development of The Ohio State University Libraries' collections.

1. Develop and implement a comprehensive Collection Management and Development Policy to define and establish collection policies and priorities for action, including the following:
   - written collection development policies
   - allocation of library materials budgets
   - preservation treatments of owned and newly acquired materials
   - inter-institutional cooperative programs
   - preservation storage of rare and little-used materials
   - weeding collections where appropriate

Refer to: Library Materials Budget Committee, Collection Development Officer, the Collections Advisory Council (CAC),

Technical Services, individual bibliographers
Cost: staff time: ca. 5,000 hours
Schedule: 1988/89

2. Establish formal and informal communication links with and among appropriate constituencies (e.g., selectors, bibliographers, fund managers) regarding collection management issues.
   Refer to: Collection Development Officer, the Collections Advisory Council (CAC), and others
   Cost: staff time: ca. 100 hours
   Schedule: by December 1988

3. Develop, as a part of the Collection Management and Development Policy, a library-wide preservation policy explicitly relating preservation and conservation concerns to collection management priorities, including the following:

   a. Implement handling and treatment priorities and methods from the point of selection, through technical services processing and at all service points where materials are shelved, circulated and/or used to ensure proper treatment of materials.

   b. Define a library-wide policy of format preferences, recognizing the archival, curricular and scholarly nature of the Libraries' collection, to include

      i. methods for evaluating and treating newly-acquired materials
      ii. methods for evaluating and treating currently-owned materials
      iii. priorities for first time binding of monographs and non-periodical serials related to specific subject/program areas
      iv. priorities for selection of retrospective serial and set fill-in acquisitions
      v. guidelines for selectors on the conservation and preservation treatment options related to overall collection preservation document.

   Refer to: Preservation Officer, Collection Development Officer, Head, Acquisition Department, Executive Committee
   Cost: staff time: ca. 200 hours
   Schedule: Interim policy by mid-1987 and a final policy contingent upon completion of the collection management policy: 1989

4. Develop an explicit section of the Collection Management and Development Policy defining "rare" and other materials that require a protected environment.

   a. Develop a set of criteria defining those materials that should be treated as "rare," with the objective of housing all such items in special collection facilities, unless alternate facilities have been approved by the Preservation and Collection Development Officers.

   b. Establish an area in the Main Library or another suitable location to serve as a protected environment for the housing of books, journals and other library materials judged to require such storage.

c. Establish a method for the identification and transfer of rare and other materials from open-shelf collections that require a protected environment, based on the collection management definitions of "rare."

Refer to: Collection Development Officer, Preservation Officer, Head, Acquisition Department, Head of Circulation, special collections curators, bibliographers in appropriate areas, Executive Committee
Cost: staff time will be necessary for developing guidelines, and service implications will require additional staff time.
Schedule: Interim report : April 1987
Completion : December 1988

5. Preservation duplication or replacement methods

a. Examine all options for preservation duplication or replacement, including : photocopying on alkaline paper, optical disk transfer, preservation microfilming, and the purchase of available replacement copies.
Refer to: Preservation Officer
Cost: staff time.
Schedule: 1986-87, in process

b. Implement a standard procedure for the replacement of deteriorating materials.
Refer to: Preservation Officer, with Head, Acquisition Department, Collection Development Officer and selectors
Cost: staff time: 60 hours
Schedule: 1986-88

6. Library Control System Applications.

a. Outline the specifications for the use of LCS in the promotion of preservation concerns, including the identification of preservation actions planned on an item-by-item basis.

b. Identify data needed for preservation efforts and the subsequent reports which can generate appropriate management information.

Refer to: Committee on Circulation and Collection Management (CCCM), Collection Advisory Council (CAC), Preservation Officer, Automation Coordinator
Cost: staff time 300 hours; programming time 6-9 months
Schedule: specifications, December 1987; implementation, early 1988.

7. Cooperative preservation efforts.

a. Support efforts of the newly-established Council on Library Resources National Commission on Preservation and Access;

b. Support the efforts of national organizations in encouraging publishers to utilize alkaline papers according to the ANSI standard for permanent papers for printed library materials. Encourage the Graduate

School to follow the recently-published Preparation of Archival Copies of Theses and Dissertations (ALA, 1986).

c. Explore the potential for participation in cooperative preservation efforts, including
   - i. local and state-wide efforts;
   - ii. regional programs such as those being discussed by the Committee on Institutional Cooperation;
   - iii. special subject programs;
   - iv. continuing efforts within the Ohio Conservation Committee, specifically those efforts related to a mass deacidification facility and preservation microfilming; and
   - v. participation in other regional, national or special collection cooperative preservation programs appropriate to OSUL's collection needs.

Refer to: Director of Libraries, Preservation Officer, Collection Development Officer, Executive Committee
Cost: staff time, dependent upon programs involved
Schedule: continuing, beginning immediately

8. Funding and fund-raising

Investigate and pursue all possibilities for securing funds for the preservation program.
Refer to: Director of Libraries, Director of the Friends of the OSU Libraries, OSU Research Foundation, and Development Office
Cost: staff time
Schedule: as soon as possible

C. Recommendations relating to preservation and conservation treatments for the OSU Libraries' collections

1. Preservation microrecording and reformatting

a. Establish a preservation microrecording program to reformat "brittle" and unstable paper-based materials.

i. Undertake a "pilot" program for selecting brittle materials for preservation microfilming, replacement, or other treatment.
Refer to: Preservation Officer, Head, Acquisition Department, Collection Development Officer, appropriate selectors
Cost: staff time: 150 hours
$10,000 for contractual microfilming/photocopying
$10,000 for the purchase of available in-print copies in paper and microformat
$ 500 for supplies and equipment
Schedule: 1986/87

ii. Contract with a microfilm service agency that follows established preservation microfilming standards.
Refer to: Preservation Officer, Head, Acquisition Department

Cost: staff time: 40 hours
Schedule: 1986/87

iii. Expand the preservation microfilming and replacement program in fy 87/88 - fy 89/90.
Refer to: Preservation Officer, Assistant Director for Technical Services, Director of Libraries
Cost: $ 50,000 (annually) for contractual microfilming
$100,000 (annually) for the purchase of available in-print copies in paper and microformat
Schedule: fy 1987/88-fy 89/90

iv. Add or redirect staff as necessary to manage and assist with the preservation microfilming program.
Refer to: Preservation Officer, Executive Committee
Cost: ca. $20,000 annually
Schedule: fy 1987/88-

b. Institute a preservation xerography program established inhouse or through contractual arrangements to copy brittle-paper texts onto alkaline papers.
Refer to: Preservation Officer, Assistant Director for Technical Services
Cost: $40-$60 average per volume; (est. $10,000+ cost per year fy1987/88-)
Schedule: Fall 1986 for pilot; fy 1987/90 expansion

c. Expand preservation microfilming at the University Archives. Filming should be increased to film at least 600 cubic feet per year.
Refer to: Director of Libraries, University Archivist
Cost: student assistant wages
Schedule: fy1987/88-

d. Monitor the development of new technologies such as optical disk and their evolving preservation standards. Participate when standards have been established and costs are comparable to preservation microfilming applications.
Refer to: Preservation Officer
Cost: staff time (minimal expenditure)
Schedule: immediately, ongoing

2. First time binding of general collections materials

a. Develop a policy that provides for commercial binding for selected paperbound monograph materials. Materials that are anticipated by selectors to receive moderate to heavy usage should be bound prior to first circulation. Special programming should be written for LCS to provide an interface code that will greatly enhance flow of material through processing to binding. Materials that are not anticipated to receive such usage, or segments of the collection that have been so identified by a Collection Management Policy, should have binding decisions deferred until after first circulation.
Refer to: Preservation Officer; Collection Development Officer, Head of Cataloging, with guidelines initiated by Collections Advisory Council; and, Automation Coordinator (for LCS

programming).
Cost: staff time: 100 hours; programming: 4 days.
Schedule: 1986/88

b. Institute specifications for the retention of paper covers in the commercial binding of books in selected subject areas (e.g., American fiction). Guidelines for specific subject areas should come from the Collections Advisory Council or individual selectors/bibliographers.
Refer to: Collections Advisory Council, Preservation Officer
Cost: staff time: 100 hours; binding costs, an additional $1.00 per volume: $2,000 per year
Schedule: 1987- dependent upon Collection Management and Development Policy.

c. Provide, on a timely basis, a functional temporary binding or other suitable shelf protection (e.g., a box) for all serials that are not routinely bound commercially. Generally, these will include titles received in microform in lieu of commercial binding. Encourage librarians to select the most appropriate format — commercially bound copy and/or film replacement — for their collections. Eliminate extended retention of temporarily-bound materials.
Refer to: Preservation Officer, Assistant Directors
Cost: supplies ($500/yr),
replacement binding equipment ($2,000 - $3,000)
student assistant wages: $3,800 per year (budgeted for fy 1986/87)
Schedule: 1986/87-

3. Routine conservation treatment ("book repair")

a. Expand the Collection Maintenance Division's capacity for performing routine conservation treatments ("book repair," etc.) for the general collections, and selectively for the special collections.
Refer to: Preservation Officer
Cost: funds are currently budgeted fy86/87 for student assistants and supplies
Schedule: immediately (in process)

b. Institute quick repair ("mending") procedures on-site in most campus libraries. Provide basic tools, supplies and training to enable those libraries to perform certain types of quick repairs and tip-ins within the library.
Refer to: Preservation Officer, appropriate Assistant Directors
Cost: supplies: $600 to equip; $300 per year supply costs;
staff time: ca. 200 hours (training)
Schedule: Fall 1986

c. Make conservation-related supplies readily available to the library community. Determine the preservation implications of all new equipment and supplies requested.
Refer to: Preservation Officer
Cost: ca. $2,000 per year
Schedule: 1986/87-

4. Full conservation treatments ("restoration")

   a. Perform a detailed needs assessment for all special collections to identify treatment needs and priorities among those collections.
      Refer to: Preservation Officer; Head, Collection Maintenance and Bindery Preparation; curators.
      Cost: ca. 500 hours
      Schedule: 1987/89

   b. Seek grant or other funding to set up a conservation treatment facility for the purpose of performing full conservation treatments on the Libraries' considerable special collection materials. Examples of collections in need of specialized full conservation treatments include the Thurber collection, the letters of Hart Crane, the Samuel Beckett papers, American Fiction Project titles, numerous paper materials from the Library for Communication and Graphic Arts, and items from the University Archives, the Hilandar Research Library, the Theatre Research Institute, and the recently-acquired Byrd Papers.

      Treatments that would be performed in such a facility would include:
      - photo-documentation of objects before and after treatments;
      - aqueous and non-aqueous deacidification of documents and books;
      - restorative treatments such as paper repairs, resewing of textblocks, restoration of leathers, repair of binding/covering materials, etc.

      Some specialized equipment will be required and (depending upon the facility's location) some space renovation will be needed for such a facility. Additional staff including skilled technicians and/or a conservator will be required to undertake these treatments.
      Refer to: Preservation Officer, Executive Committee, Special Collections Roundtable
      Costs: equipment, renovation, staff – to be determined
      Schedule: fy 1987/89

   c. Until an inhouse facility for performing full conservation treatments is available, contract with outside conservation services (e.g., the Northeast Document Conservation Center in Massachusetts) for the treatment of special collections materials that require specialized skills that the Libraries are unable to provide.
      Refer to: Preservation Officer, curators of special collections
      Cost: to be determined on a per-item basis
      Schedule: 1987/89–

D. Recommendations relating to the handling, shelving and display of the collections.

1. Training programs for library employees

   a. Develop training programs for Libraries faculty, staff and student assistants

i. Develop a series of workshops to train all Libraries employees in appropriate procedures for handling and shelving materials.
    Refer to: Preservation Officer
    Cost: staff time: Preservation Officer's time; supplies $300 per year
    Schedule: late Fall 1986, ongoing

ii. Develop special workshops on particular subjects, such as repairs or for particular formats of materials, such as maps, microfilms, etc..
    Refer to: Preservation Officer; Head, Collection Maintenance and Bindery Preparation
    Cost: staff time: 40 hours per year; supplies: $100/year
    Schedule: Winter 1987, ongoing

iii. Undertake disaster preparedness "drills" and "practice sessions" for library emergencies.
    Refer to: Preservation Officer
    Cost: staff time
    Schedule: 1986/87 ongoing

2. Dissemination of information

a. Disseminate preservation information and procedures throughout the entire system.

i. Develop a Preservation Manual for use by all Libraries employees, outlining appropriate routing and handling procedures for various types of materials; appropriate streamers to be used for various treatments and dispositions; etc.
    Refer to: Preservation Officer in consultation with appropriate library personnel
    Cost: staff time: ca. 200 hours; supplies: $200
    Schedule: 1986/88

ii. Issue the Emergency Procedure Manual as a standard preservation procedure for all Library locations. (See also A.4.)
    Refer to: Preservation Officer
    Cost: (included in A.4 above)
    Schedule: Fall 1986/Winter 1987

iii. Begin a regular News Notes preservation section.
    Refer to: Preservation Officer
    Cost: staff time
    Schedule: Winter 1987–

iv. Conduct an annual Preservation Awareness Week.
    Refer to: Preservation Officer, Office of Library User Education, Exhibits Committee
    Cost: Staff time: 20 hours; supplies/duplication: $150
    Schedule: Winter 1987–

v. Inform Library faculty, staff and student assistants and the campus community about strengths of the collections, major new

acquisitions, special projects, etc., as a means of instilling/developing a sense of pride in and responsibility for the collections.
Refer to: Executive Committee, Collection Development Officer, Office of Library User Education, Tracings editor
Cost: staff time (undetermined)
Schedule: 1986/87

3. Patron Awareness

a. Heighten awareness among Libraries' patrons in order to encourage appropriate habits in the usage of the Libraries' collections.

i. Promote preservation actively among library patrons through signage, handouts, bookmarks, bulletin boards devoted to preservation, exhibits, etc.
Refer to: Preservation Officer, Office of Library User Education
Cost: staff time: 100 hours; supplies: $300 annually
Schedule: Fall 1986–

ii. Improve the ambiance of all campus libraries by upgrading the appearance of the libraries (painting areas to eradicate peeling, graffitti, etc; having all signage produced centrally; improving housekeeping, etc.)
Refer to: Executive Committee
Cost: to be determined
Schedule: as soon as possible

iii. Obtain protective bookbags to be given to users during inclement weather.
Refer to: Preservation Officer, and Office of Library User Education; possibly Friends of the Libraries
Cost: $500 per year
Schedule: Fall 1986/Winter 1987

iv. Include in the Library User Education Plan appropriate sections relative to preservation awareness.
Refer to: Preservation Officer and Director of Office of Library User Education
Cost: staff time
Schedule: Fall 1986 (in process)

b. Encourage the addition of explicit language to the Code of Student Conduct relating to the use and abuse of library materials.
Refer to: Executive Committee and Preservation Officer
Cost: staff time: ca. 20 hours
Schedule: 1986/88

4. Support structures

a. Obtain an additional supply of step stools and non–damaging book

supports (bookends).
Refer to: Preservation Officer, Executive Committee
Cost: $4,000 per year
Schedule: 1986/89

b. Secure wider/deeper shelving for irregularly sized materials.
Locations especially in need of this shelving are Special Collections, Fine Arts, Cataloging, the holding area of Main Library's r.009, the Theatre Research Institute, and others.
Refer to: Preservation Officer, librarians in affected locations
Cost: est. $5,000
Schedule: as funds are available

c. Secure appropriate stationary shelving for work stations in processing areas to minimize the use of booktrucks in lieu of shelving.
Refer to: Assistant Director for Technical Services
Cost: to be determined (est. $1,000)
Schedule: as funds are available

d. Obtain additional high-quality, durable booktrucks to facilitate shelving and safe transport of materials.
Refer to: Assistant Directors
Cost: 10 trucks per year ($3,000) for next 5 years
Schedule: as funds are available

e. Obtain additional microform storage where needed, especially AGI and BSL.
Refer to: Asssistant Directors
Cost: to be determined ($1,000 est.)
Schedule: as funds are available

f. Eliminate materials transport hazards in campus libraries. For example, equip fire door sills with ramps to make transportation of booktrucks less hazardous.
Refer to: Building Coordinators, Preservation Officer,
appropriate librarians
Cost: to be determined in each library
Schedule: as identified

5. Handling of library materials

a. Eliminate destructive or potentially destructive procedures in the handling and processing library materials. Examples:

i. Discontinue attaching paper clips to book pages in processing.
Refer to: Assistant Director for Technical Services
Cost: none
Schedule: immediately

ii. Discontinue using damaging pressure-sensitive tapes on any Library materials for use in transit, for quick "repair", etc.
Refer to: Preservation Officer, Assistant Directors
Cost: none
Schedule: immediately

iii. Improve shelf and stacks maintenance in all locations.
Refer to: Preservation Officer, Assistant Directors
Cost: staff time: when routinized, minimal cost
Schedule: 1986/87-

iv. Eliminate all damaging and defacing post-processing stamping and other marking of library materials. Create non-damaging reserves streamers and/or Mylar book jackets for reserves or reference materials. Use non-water-soluble inks in stamping Library materials.
Refer to: Preservation Officer, Assistant Directors
Cost: supplies: est. $200 per year
Schedule: 1986/87-

v. Provide training for all staff involved with the insertion of Tattletapes and Checkpoint theft detection devices.
Refer to: Preservation Officer, appropriate librarians
Cost: staff time: 20 hours
3M videotape $100
Schedule: Fall 1986-

vi. Obtain bookplates produced on alkaline paper to replace the currently-used acidic plates.
Refer to: Preservation Officer
Cost: minimal
Schedule: as supplies required

vii. Create written guidelines that set out the rules and regulations of Special Collections, Hilandar Research Library and the Theatre Research Institute.
Refer to: Curatorial staff in consultation with Preservation Officer and Assistant Director for Main Library Public Services
Cost: staff time (20 hours)
Schedule: 1986-88

viii. Develop guidelines for Interlibrary Loan lending and packaging for mail delivery. Also, develop policy on the treatment of materials identified by ILL as unfit for loan because of condition.
Refer to: Preservation Officer, Interlibrary Loan librarian in consultation with Business Office/Mail Room
Cost: staff time: 20 hours; supplies $150 per year
Schedule: 1986/88

ix. Provide reliable self-service photocopying machines. Machines that are consistently "out of order" contribute to book theft and mutilation. Investigate the use of machines that are less damaging to materials.
Refer to: Executive Committee, Budget Officer
Cost: to be determined
Schedule: as contract, funds permit

6. Book return systems

   a. Phase out all stand-alone, external after-hours book returns at all campus libraries. Removal of all after-hours book returns will reduce damage to library materials; it will also directly benefit library patrons by ensuring that their materials are safely returned to the appropriate location.
      Refer to: Executive Committee
      Cost: none
      Schedule: immediately

   b. At in-library book returns, reduce potential damage to books by a) encouraging patrons to return library materials directly to staff and to obtain receipts for returned materials; b) using only spring loaded bins and cushioned pads; and/or c) emptying frequently.
      Refer to: Preservation Officer, Assistant Directors, Office of Library User Education
      Cost: to be determined
      Schedule: immediately

7. Exhibits

   a. Upgrade and/or repair the Main Library Skylight exhibit cases for improved security and an improved exhibit environment for the displayed materials.
      Refer to: Exhibits Committee for further investigation
      Cost: estimate $7,000, not including filtering glass and alarming the cases.
      Schedule: as funds permit

   b. Develop and follow guidelines for the exhibition of rare and/or special materials.
      Refer to: Exhibits Committee, Special Collections Roundtable, Executive Committee
      Cost: staff time (50 hours)
      Schedule: 1986/87, in process

   c. Investigate methods to reduce the amount of natural light streaming into the Skylight Exhibition area, to reduce light damage to exhibited materials.
      Refer to: Preservation Officer; Main Library Building Coordinator
      Cost: investigations will estimate costs
      Schedule: Fall 1986

8. Food and drink consumption in the Libraries

   a. Renew efforts to enforce the existing food and drink policy for all public areas of the Libraries.
      Refer to: all library staff
      Cost: none
      Schedule: immediately

b. Hire student security monitors to enforce the food and drink policy and the smoking regulations in Main Library. (See A.4.c) Such personnel would at the same time provide improved security for patrons and the collections.
Refer to: Director, Assistant Director Main Library Public Services, Office of Public Safety
Cost: $32,000 per year (Security Committee estimate for 8,000 student assistant hours per year)
Schedule: as funds permit

c. Ban food and beverages from all public and non-public work areas in the Libraries. If occasional staff parties are permitted in non-public work areas, it is recommended that refreshments be confined to a small physical area and a thorough clean-up be undertaken afterwards.
Refer to: Executive Committee
Cost: none
Schedule: immediately

d. Remove or relocate plants that create a potential for damage to Library materials or that encourage vermin in the area.
Refer to: Executive Committee
Cost: none
Schedule: immediately

CONCLUSION

The Ohio State University Libraries' Preservation Study Team has spent eleven months conducting its investigations and preparing this report. Some thirty other library faculty and staff have become directly involved in the process. The study has confirmed the precarious physical condition of the Libraries' collections and has highlighted problems with the physical environments in which the collections are housed. The Study Team evaluated the Libraries' past "preservation history" and has outlined options for the future.

A final recommendation of the Study Team is that this Final Report and its recommendations be carefully reviewed and re-evaluated in fy1990 to note progress and also the continuing preservation needs of the collections.

The foregoing Recommendations are but an outline of a strategy to deal with the library collection preservation challenges faced by The Ohio State University. The Study Team recognizes that this Preservation Planning Program is only a beginning and that some key components are, in fact, operational, while other portions have not yet begun. The Study Team notes a positive, heightened awareness for preservation within the University Libraries and, it is hoped, the University at large, and is encouraged that good beginnings will be followed by steady progress in the coming years.

V. PROPOSED IMPLEMENTATION SCHEDULE FOR PRESERVATION SELF-STUDY RECOMMENDATIONS

(Arrangement is by subject area, not in priority order)

Refer to for action, recommendations, proposal, further study	Recommendation	Fiscal Year (est. cost) 86/87	87/88	88/89	89/90	90/91
RELATING TO IMPROVEMENTS OF THE PHYSICAL ENVIRONMENT:						
Director of Libraries and Preservation Officer	Develop cooperative arrangements between the Libraries and Facilities Maintenance (A.1.a.)	////////// (staff time)	//////////	//////////	//////////	//////////
Preservation Officer, Main Library Building Coordinator	Provide building coordinators with appropriate information about preservation (A.1.b.)		////////// (staff time, ca. 30 hours)	//////////	//////////	//////////
Director of Libraries	Certified air quality technician position (A.1.c.)		////////// (ca. $21,000/year)	//////////	//////////	//////////
Director of Libraries	Exemptions from energy conservation guidelines and mechanism for effective implementation (A.2.a.)		////////// (generally increased energy costs)	//////////	//////////	//////////
Director of Libraries	Implement adjustments to all existing libraries HVAC systems (A.2.b.)		////////// (generally increased energy costs)	//////////	//////////	//////////
Director of Libraries	Install year-round environmental controls in Business Library, Geology Library (A.2.c.)					///// (undetermined)
Preservation Officer	Monitor temperature and relative humidity areas (A.2.d.)	////////// (ca. $3500)	//////////	//////////	//////////	//////////
Director of Libraries and Preservation Officer	Utilize high-efficiency filters (A.2.e.)	////////// ($4,000 annually)	//////////	//////////	//////////	//////////
Main Library Building Coordinator	Install air diverters in areas of Main Library (A.2.f.)	///// ($400-500)				
Head of Circulation, Bookstacks Supervisor, appropriate librarians	Relocate all books currently shelved within twelve inches of radiators (A.2.g.)	////////// (staff time, additional shelving space)	/////			

Refer for action, recommendations, proposal, further study	Recommendation	86/87	87/88	88/89	89/90	90/91
				Fiscal Year (est. cost)		
Curator, Special Collections and Preservation Officer	Remove incunabula from the existing vault (A.2.h.)	///// (staff time, rental of outside vault if needed)				
Executive Committee, Main Library Building Coordinator, Preservation Officer	Install ultraviolet-filtering storm windows in all book storage areas (A.3.a.)					////////// (undetermined)
Preservation Officer, Bookstacks Supervisor, appropriate librarians	Utilize existing shades or blinds (minimal: added staff routine) (A.3.b.)	/////////	//////			
Preservation Officer, Main Library Building Coordinator, special collections curators	Provide ultraviolet filtering for all fluorescent fixtures in special collections and exhibit areas (A.3.c.)	///////// ($1,000 est.)	//////			
Executive Committee, Office of Physical Facilities	Utilize lamps with low levels of ultraviolet radiation in book storage areas (A.3.d.)	///////// (minimal)	/////////	/////////	/////////	/////////
Executive Committee, Preservation Officer	"Lights off" policy (A.3.e.)	///////// (policy: no cost; filtering: ca. $300; installation of additional switches: $5,000+)	//////			
Preservation Officer	System-wide "Emergency Plan for the OSU Libraries" (A.4.a.i.)	///// (staff time: ca. 120 hours; supplies/printing $200)				
Preservation Officer	Emergency supply kits for each campus library (A.4.a.ii.)	///// ($1,000)				
Director of Libraries, University Police Chief	Investigate Campus Police building walk-throughs (A.4.a.iii.)	///////// (staff time)	/////////	/////////	/////////	/////////
Office of Physical Facilities	Repair immediately all known leaks (A.4.b.i.)	///////// (undetermined)	/////////	/////////	/////////	/////////
Office of Physical Facilities	Inspect all roofs at regular intervals (A.4.b.ii.)	///////// (staff time)	/////////	/////////	/////////	/////////
University Architect's Office	Where possible, eliminate water sources from book storage facilities (A.4.b.iii.)	///////// (undetermined)	/////////	/////////	/////////	/////////

			Fiscal Year (est. cost)			
Refer to for action, recommendations, proposal, further study	Recommendation	86/87	87/88	88/89	89/90	90/91
Preservation Officer, Main Library Building Coordinator	Purchase wet/dry vacuum cleaners and/or sump pumps (A.4.b.iv.)	///// ($200)				
Preservation Officer	Secure a contract with freeze-dry contractor (A.4.b.v.)	///// ($500+/year, depending upon contract coverage)				
appropriate Assistant Directors	Stored materials in basement and ground floor areas at lease 3 to 6 inches above the floor level (A.4.b.vi.)	///// (minimal)				
Preservation Officer, Executive Committee	purchase a Wei T'o Book Dryer (A.4.b.vii.)		///// ($17,500)			
Preservation Officer	Investigate the need for remote water sensors (A.4.b.viii.)	/////////////// (staff time: 10 hours)				
Executive Committee, Department of Fire Safety	Identify all areas that lack smoke alarms (A.4.c.i.)	(undetermined)	/////////////////////////			
Department of Fire Safety, Preservation Officer, Executive Committee	Restrict smoking in libraries (A.4.c.ii)	///// (signage: ca. $500; staff time)				
Executive Committee	Secure stacks fire doors in Main Library (A.4.c.iii)	/////////////// ($15,000)				
Executive Committee, Office of Physical Facilities	Seal cracks and openings between Main Library bookstacks floors as a precaution against spread of fire (A.4.c.iv.)		/////////////// (undetermined)			
Preservation Officer, University Archivist	Move and refit fumigation chamber (A.4.d.i.)	/////////////// (ca. $2,000)				
Preservation Officer	Investigate adequacy of pest control (A.4.d.ii.)	/////////////// (staff time)				
Director of Libraries	Centralized storage facility (A.5.a.)		/////////////////////////////////// (several million dollars)			
Executive Committee	Additional study facilities outside of campus libraries (A.5.b.)		/////////////////////////////////// (undetermined)			

Refer to for action, recommendations, proposal, further study	Recommendation	86/87	87/88	88/89	89/90	90/91
				Fiscal Year (est cost)		
Assistant Directors, Preservation Officer	Bookstacks cleaning program in all libraries (A.6.a.)	// (equipment: $1,000; supplies: $250/year; staff: 2,000 student assistant hours)				
Director of Libraries	Increase custodial staff (A.6.b.)		///////////////////////////////////// (undetermined)			
RELATING TO THE MANAGMENT AND DEVELOPMENT OF THE OSU LIBRARIES' COLLECTION:						
Library Materials Budget Committee, Collection Development Officer, the CAC, Technical Services, individual bibliographers	Develop and implement a comprehensive Collection Management/Development Policy (B.1.)		//////////////// (staff time: ca. 5,000 hours)			
Collection Development Officer and the CAC	Formal and informal communication links (B.2.)		///// (staff time: ca. 100 hours)			
Preservation Officer, Collection Development Officer, Head, Acquisition Department, Executive Committee	Library-wide preservation policy (B.3.)		//////////////// (staff time: 200 hours)			
Collection Development Officer, Preservation Officer, Head, Acquisition Department, Head of Circulation, special collections curators, bibliographers in appropriate areas, Executive Committee	Develop guidelines for "rare" status (B.4.)	/////////////////////////// (staff time)				
Preservation Officer	Examing all options for preservation duplication or replacement (B.5.a.)	///// (staff time, in process)				
Preservation Officer, with Head, Acquisition Department, Collection Development Officer and selectors	Standard procedure for the replacement of deteriorating materials (B.5.b.)	//////////////// (staff time: 60 hours)				
CCCM, CAC, Preservation Officer, Automation Coordinator	Library Control System preservation applications (B.6.)		//////////////// (staff time: ca. 300 hours; programming time [6-9 months])			

Refer to for action, recommendations, proposal, further study	Recommendation	Fiscal Year (est. cost) 86/87	87/88	88/89	89/90	90/91
Director of Libraries, Preservation Officer, Collection Development Officer, Executive Committee	Explore the potential for participation in cooperative preservation efforts (B.7.)	///////// (staff time)	/////////	/////////	/////////	/////////
Director of Libraries, Director of the Friends of the OSU Libraries, OSU Research Foundation Development Office	Investigate all possibilities for securing funds for the preservation program (B.8.)	///////// (staff time)	/////////	/////////	/////////	/////////
RELATING TO PRESERVATION AND CONSERVATION TREATMENTS FOR THE OSU LIBRARIES' COLLECTIONS:						
Preservation Officer, Head, Acquisition Department, Collection Development Officer, appropriate selectors	"Pilot" program for preservation microfilming, replacement (C.1.a.i.)	///// (staff time: 150 hours; supplies and equipment: $500; contractual microfilming/photocopying $10,000; purchase of replacement texts $10,000)				
Preservation Officer, Head, Acquisition Department	Contract with a microfilm service agency (C.1.a.ii.)	///// (staff time: 40 hours)				
Preservation Officer, Assistant Director for Technical Services, Director of Libraries	Expand the preservation microfilming and replacement program (C.1.a.iii.)	///////// ($ 50,000 for contractual filming, annually; $100,000 for replacement copies, annually;	/////////	/////////	/////////	
Preservation Officer, Executive Committee	Add or redirect staff as necessary to manage and assist with the preservation microfilming program (C.1.a.iv.)		///////// (ca. $20,000 annually)	/////////	/////////	/////////
Preservation Officer, Assistant Director for Technical Services	Preservation xerography program (C.1.b.)	///////// (ca. $10,000 annually)	/////////	/////////	/////////	/////////
Director of Libraries, University Archivist	Expand preservation microfilming at the University Archives (C.1.c.)		///////// (student assistant wages)	/////////	/////////	/////////
Preservation Officer	Monitor new technologies' preservation applications (C.1.d.)	///////// (staff time; minimal expenditure)	/////////	/////////	/////////	/////////
Preservation Officer, Collection Development Officer, Head of Cataloging, with guidelines initiated by CAC and Automation Coordinator (for LCS programming)	Policy for commercial binding paperbound monograph materials; programming for LCS to provide an interface code (C.2.a.)	//////// (staff time: 100 hours; programming 4 days)	///////			

Refer to for action, recommendations, proposal, further study	Recommendation	Fiscal Year (est. cost)				
		86/87	87/88	88/89	89/90	90/91
CAC, Preservation Officer	Specifications for the retention of paper covers in binding of books in selected subject areas (C.2.b.)	/////////////// (staff time: 50 hours; binding costs, an additional $1.00 per volume [$2,000/year])				
Preservation Officer, Assistant Directors	Functional temporary binding for all serials not routinely bound commercially (C.2.c.)	// (supplies: $500/year; replacement binding equipment: $2,000-$3,000; student assistant wages: $3,800/year [budgeted for fy86/87])				
Preservation Officer	Expand the Collection Maintenance Division's capacity for performing routine conservation treatments (C.3.a.)	// (funds currently budgeted for student assistants and supplies)				
Preservation Officer, appropriate Assistant Directors	Institute quick repair procedures on-site in most campus libraries (C.3.b.)	// (staff time: ca. 200 hours; $600 to equip; $300/year supply costs)				
Preservation Officer	Make conservation-related supplies readily available; determine the preservation implications of new supplies (C.3.c.)	// (ca. $2,000 per year)				
Preservation Officer, curators	Needs assessment for all special collections (C.4.a.)		/////////////// (ca. 500 hours)			
Preservation Officer, Executive Committee, Special Collections Roundtable	Set up a conservation treatment facility for full conservation treatments (special collection) (C.4.b.)		/////////////// (equipment, renovation, staff: undetermined)			
Preservation Officer, curators of special collections	Contract with outside conservation services (C.4.c.)		/////////////// (undetermined)			
RELATING TO HANDLING, SHELVING AND DISPLAY OF THE COLLECTIONS:						
Preservation Officer	Develop training programs for Libraries faculty, staff and student assistants (D.1.a.)	// (staff time; supplies: $400/year)				
Preservation Officer	Preservation Manual (D.2.a.i.)	/////////////// (ca. 200 hours; supplies: $300)				
Preservation Officer	Regular News Notes preservation section (D.2.a.iii.)	// (staff time)				

Refer to for action, recommendations, proposal, further study	Recommendation			Fiscal Year (est. cost)		
		86/87	87/88	88/89	89/90	90/91
Preservation Officer, Office of Library User Education, Exhibits Committee	Annual Preservation Awareness Week (D.2.a.iv.)	/////////	/////////	/////////	/////////	/////////
Preservation Officer, Office of Library User Education	Promote preservation actively to library patrons (D.3.a.i.)	///////// (staff time: 100 hours; supplies: $300 annually)	/////////	/////////	/////////	/////////
Executive Committee	Improve the ambiance of all campus libraries (painting, signage, improving housekeeping, etc.) (D.3.a.ii.)	///////// (undetermined)	/////////	/////////	/////////	/////////
Preservation Officer, Director of Office of Library User Education	Protective bookbags (D.3.a.iii.)	///////// ($500/year)	/////////	/////////	/////////	/////////
Preservation Officer, Director of Office of Library User Education	Include preservation Awareness in the Library User Education Plan (D.3.a.iv.)	/////(in process) (staff time)				
Executive Committee, Preservation Officer	Explicit language to the Code of Student Conduct (D.3.b.)	//////// (staff time: 20 hours)	///////			
Preservation Officer, Executive Committee, Budget Officer	Obtain step stools and book supports (D.4.a.)	//////// ($4,000 per year)	////////	/////////		
Preservation Officer, librarians in affected locations	Wider/deeper shelving (D.4.b.)	//////// ($3,000)	///////			
Assistant Director for Technical Services	Stationary shelving for work stations in processing areas (D.4.c.)	//////// ($1,500)	///////			
Assistant Directors	Obtain additional booktrucks (D.4.d.)	///////// ($3,000 per year)	/////////	/////////	/////////	/////////
Assistant Directors	Obtain additional microform storage where needed (D.4.e.)	//////// (undetermined)	///////			
Building Coordinators, Preservation Officer, appropriate	Eliminate materials transport hazards in campus libraries (D.4.f.)	///////// (undetermined in each location)	/////////	/////////	/////////	/////////
Assistant Director for Technical Services	Discontinue attaching paper clips to book pages (D.5.a.i.)	///// (none)				

Refer to for action, recommendations, proposal, further study	Recommendation			Fiscal Year (est. cost)		
		86/87	87/88	88/89	89/90	90/91
Preservation Officer, Assistant Directors	Discontinue using damaging pressure-sensitive tapes (D.5.a.ii.)	///// (none)				
Preservation Officer, Assistant Directors	Improve shelf and stacks maintenance in all locations (D.5.a.iii.)	///////// (staff time)	/////////	/////////	/////////	/////////
Preservation Officer, Assistant Directors	Eliminate all damaging and defacing post-processing stamping and other marking (D.5.a.iv.)	//////// (supplies)	///////			
Preservation Officer, appropriate librarians	Tattletapes and Checkpoint training (D.5.a.v.)	///////// (staff time, 3M videotape: $100)	/////////	/////////	/////////	/////////
Preservation Officer	Obtain bookplates produced on alkaline paper (D.5.a.vi.)	//////// (minimal)	///////			
Curatorial staff in consultation with Preservation Officer and Assistant Director for Main Library Public Services	Written guidelines for Special Collections, Hilandar Research Library and the Theatre Research Institute (D.5.a.vii.)	//////// (staff time)	///////			
Preservation Officer, Interlibrary Loan librarian, Assistant Director Main Library Public Services	Guidelines for Interlibrary Loan lending and packaging (D.5.a.viii.)	//////// (supplies, staff time)	///////			
Executive Committee, Budget Officer	Provide reliable self-service photocopying machines (D.5.a.ix.)	///////// (undetermined)	/////////	/////////	/////////	/////////
Executive Committee	Phase out all after-hours book returns (D.6.a.)	//////// (none)	///////			
Preservation Officer, Assistant Directors, Office of Library User Education	Reduce potential damage to books at library returns (D.6.b.)	///// (none)				
Exhibits Committee for further investigation	Upgrade and/or repair the Main Library Skylight exhibit cases (D.7.a.)	//////// (estimate $7,000)	///////			

Refer to for action, recommendations, proposal, further study	Recommendation	Fiscal Year (est. cost) 86/87	87/88	88/89	89/90	90/91
Exhibits Committee, Special Collections Roundtable, Executive Committee	Guidelines for exhibition (D.7.b.)	////////	////////	(in process)		
Preservation Officer, Main Library Building Coordinator, Executive Committee	Reduce the amount of natural light into the Skylight Exhibition area (D.7.c.)	//////// (investigation will estimate costs)	////////			
all library staff	Renew efforts to enforce the existing food and drink policy (D.8.a.)	//////// (none)	////////	////////	////////	////////
Director of Libraries, Assistant Director Main Library Public Services, Office of Public Safety	Hire student security monitors in Main Library (D.8.b.)	($32,000 per year)	////////	////////	////////	////////
Executive Committee	Ban food and beverages from all public and non-public work areas in the Libraries	//////// (none)	////////	////////	////////	////////
Executive Committee	Remove or relocate house plants (D.8.d.)	//////// (none)	////////	////////	////////	////////

Appendices

1. Task forces membership
2. Preservation Policy Statement Outline (draft)
3. Organization charts: OSU Libraries Organization Chart
   Organization Chart/Directory, OSU Libraries' Preservation Office

Appendix 1

Preservation Self-Study : List of Task Forces and their Memberships

Task Force 1: Physical environments

Amy Eley, Co-Chair	Main Library Circulation Department
Rob Kerr, Co-Chair	Main Library Building Coordinator
Nancy Miller	Law Library
Lisa Wooles	Business Library
Barbara VanBrimmer	Health Science Library
Judit Ebner	Music Library

Task Force 2: Physical condition of the collection

Hazel Benson, Co-Chair	Pharmacy Library
Wes Boomgaarden, Co-Chair	Preservation Office
Jan Mayo	Special Collections
Hannah Thomas	Catalog Department
Virginia Russell	Information Services
Olga Beshers	Catalog Department
Connie McClendon	Monograph Acquisition Division
Barbara VanBrimmer	Health Science Library

Task Force 3: Disaster prevention and preparedness

Lucy Caswell, Chair	Library for Communication and Graphic Arts
Harry Campbell	Collection Maintenance and Bindery Preparation
Raimund Goerler	University Archives
Dinorah Monge	Health Science Library
Nancy Miller	Law Library
Scott Seaman	Education Library

Task Force 4: Organizational implications of preservation

Helen Brooks, Co-Chair	Catalog Department
Wes Boomgaarden, Co-Chair	Preservation Office
Marjorie Adams	Acquisition Department
Andrea Moore	Catalog Department
Sharon Sullivan	Personnel Office
Margery Tibbetts	Geology Library
Laurence Hallewell	Language and Area Studies

Task Force 5: Preservation education and awareness

Maureen Donovan, Chair	Language and Area Studies
Eva Godwin	Interlibrary Loan
Mary-Beth Bunge	User Education
Jim Whitcomb	Monographic Acquisition Division
Carol Mularski	Health Science Library
Sally Sims	User Education

Task Force 6: Resources, collection development and preservation

Gay Dannelly, Chair	Aquisition Department/Collection Development
Tamsen Dalrymple	Information Services
Predrag Matejic	Hilandar Research Library
Heidi Mercado	Mathematics Library
Charles Popovich	Business Library
Bob Thorson	History Graduate Library
Vicki Welborn	Biological Sciences Library
Nancy Sanders	Home Economics Library

The Ohio State University Libraries
Preservation Policy Statement Outline (DRAFT)

The Ohio State University Libraries is committed to the responsible development, management and provision of access to present and future collections. A most important aspect of that responsibility is the preservation of the materials themselves. As a major research library, the Ohio State University Libraries is intent upon the acquisition, preservation and retention of a wide variety of materials necessary to support the University's teaching, research and service programs, within the framework of national library programs.

In order to fulfill this responsibility the Libraries, with the agreement and support of the University administration, will establish a preservation program and policy statement reflecting the Libraries' collection management and development priorities and policies.

I. General introduction.
    A. Statement of collection philosophy, principles, priorities and goals.
    B. Definition of terms.
    C. Statement of implementation responsibilities.

II. Description of the collections.
    A. Categories of materials.
    B. Criteria for preservation decisions, including issues of access and use.
    C. Principles and guidelines for handling materials in all routine and special processing procedures.

III. Physical environment and support structures.
    A. Housing of materials including open stacks, rare and restricted access materials, non-book materials and remote storage.
    B. Environmental specifications.
    C. Security.
    D. Handling and display of materials.

IV. Emergency preparedness.

V. Education and outreach programs: internal and external to the Libraries.

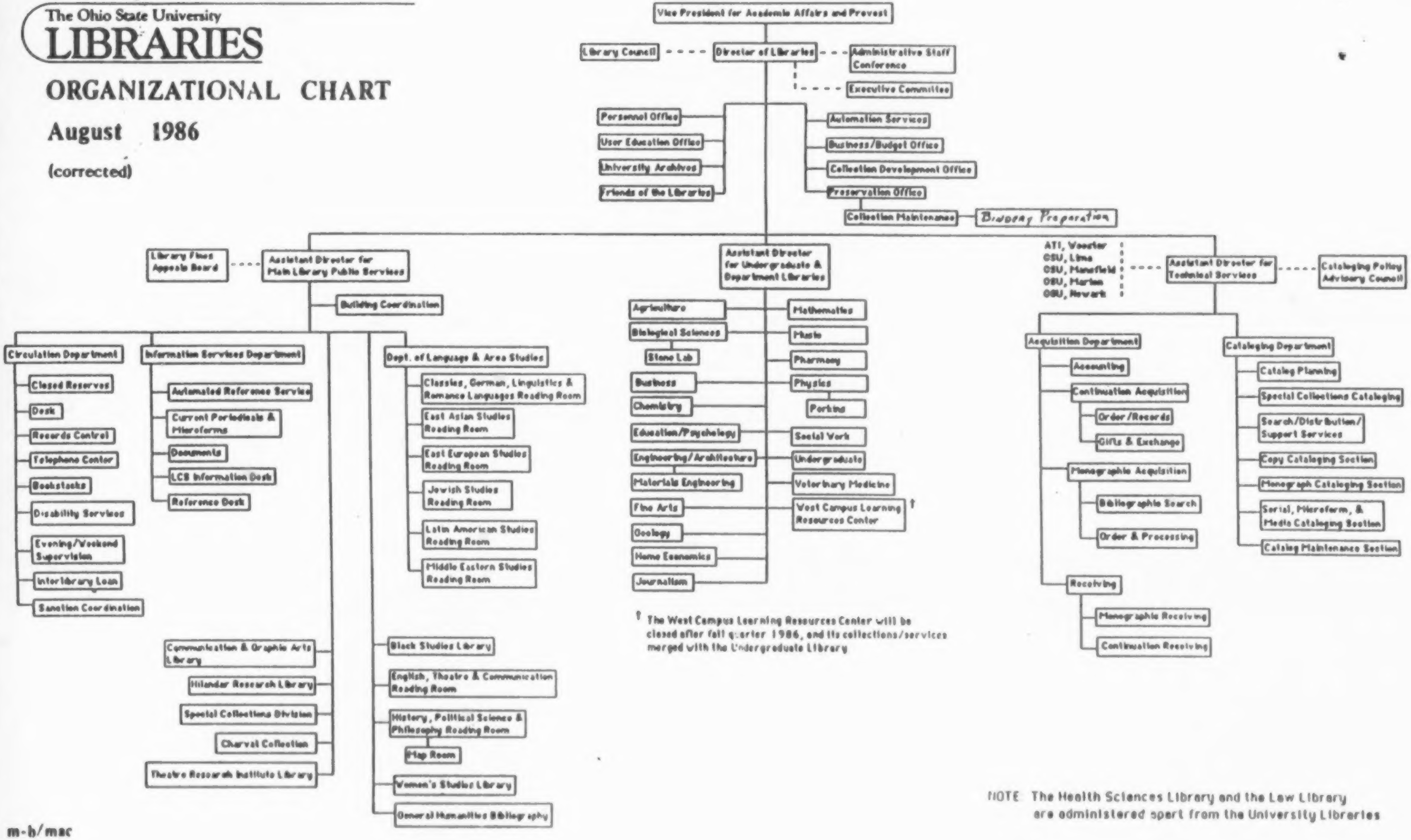
VI. Preservation and conservation treatments.
    A. Identification of available treatment options both within and external to the Libraries.
    B. Development of guidelines for the use of specific treatments reflecting collection management, use and access priorities.

The Ohio State University
LIBRARIES

ORGANIZATIONAL CHART

August 1986

(corrected)


Vice President for Academic Affairs and Provost
Library Council
Director of Libraries
Administrative Staff Conference
Executive Committee
Personnel Office
User Education Office
University Archives
Friends of the Libraries
Automation Services
Business/Budget Office
Collection Development Office
Preservation Office
Collection Maintenance
Bindery Preparation
Library Fines Appeals Board
Assistant Director for Main Library Public Services
Building Coordination
Circulation Department
Closed Reserves
Desk
Records Control
Telephone Center
Bookstacks
Disability Services
Evening/Weekend Supervision
Interlibrary Loan
Sanction Coordination
Information Services Department
Automated Reference Service
Current Periodicals & Microforms
Documents
LCS Information Desk
Reference Desk
Dept. of Language & Area Studies
Classics, German, Linguistics & Romance Languages Reading Room
East Asian Studies Reading Room
East European Studies Reading Room
Jewish Studies Reading Room
Latin American Studies Reading Room
Middle Eastern Studies Reading Room
Communication & Graphic Arts Library
Hilandar Research Library
Special Collections Division
Charvat Collection
Theatre Research Institute Library
Black Studies Library
English, Theatre & Communication Reading Room
History, Political Science & Philosophy Reading Room
Map Room
Women's Studies Library
General Humanities Bibliography
Assistant Director for Undergraduate & Department Libraries
Agriculture
Biological Sciences
Stone Lab
Business
Chemistry
Education/Psychology
Engineering/Architecture
Materials Engineering
Fine Arts
Geology
Home Economics
Journalism
Mathematics
Music
Pharmacy
Physics
Perkins
Social Work
Undergraduate
Veterinary Medicine
West Campus Learning Resources Center †
ATI, Wooster
OSU, Lima
OSU, Mansfield
OSU, Marion
OSU, Newark
Assistant Director for Technical Services
Cataloging Policy Advisory Council
Acquisition Department
Accounting
Continuation Acquisition
Order/Records
Gifts & Exchange
Monographic Acquisition
Bibliographic Search
Order & Processing
Receiving
Monographic Receiving
Continuation Receiving
Cataloging Department
Catalog Planning
Special Collections Cataloging
Search/Distribution/Support Services
Copy Cataloging Section
Monograph Cataloging Section
Serial, Microform, & Media Cataloging Section
Catalog Maintenance Section

† The West Campus Learning Resources Center will be closed after fall quarter 1986, and its collections/services merged with the Undergraduate Library

NOTE: The Health Sciences Library and the Law Library are administered apart from the University Libraries

m-b/mac

Appendix 3 (p.1)

BEST COPY AVAILABLE

The Ohio State University
LIBRARIES

Preservation Office

THE OHIO STATE UNIVERSITY LIBRARIES
PRESERVATION OFFICE
Organization Chart/Directory

Wes Boomgaarden, Preservation Officer
x2-6151

Collection Maintenance & Bindery Preparation Department
Harry Campbell, Head
x2-6515

Bindery Preparation Division
x2-6515

Elfriede Pletz, Supervisor
Library Associate 1

Linda Bolles, LMTA 1

Kris Dixon, Library Assistant

Auring Peregrino, Library Assistant

Mary Lou Trejo, Library Assistant

1.0 FTE Student Assistants

Collection Maintenance Division
x2-2436

Orville Martin, Supervisor, LMTA 2

Celine Douek, Library Assistant

Patricia Laird, LMTA 1
(60% FTE)

Mary Luken, Library Assistant

Sarah Muster, Library Assistant

Mary Lowden, Typist 2 (Labeling)

5.5 FTE Student Assistants

9/86

"END OF DOCUMENT"

Preservation Officer 106 Main Library 1858 Neil Avenue Mall Columbus, OH 43210 614-422-6151
Bindery Preparation Division 037 Main Library 614-422-6515
Collection Maintenance Division 007 Main Library 614-422-2436